

2012

Relationship between Teacher Self-efficacy and Use of Evidence-based Practices in Managing Students with Challenging Behaviors

Sheila R. Carr

College of William & Mary - School of Education

Follow this and additional works at: <https://scholarworks.wm.edu/etd>



Part of the [Educational Methods Commons](#), [Educational Sociology Commons](#), and the [Teacher Education and Professional Development Commons](#)

Recommended Citation

Carr, Sheila R., "Relationship between Teacher Self-efficacy and Use of Evidence-based Practices in Managing Students with Challenging Behaviors" (2012). *Dissertations, Theses, and Masters Projects*. Paper 1539618685.

<https://dx.doi.org/doi:10.25774/w4-h5nc-3w92>

This Dissertation is brought to you for free and open access by the Theses, Dissertations, & Master Projects at W&M ScholarWorks. It has been accepted for inclusion in Dissertations, Theses, and Masters Projects by an authorized administrator of W&M ScholarWorks. For more information, please contact scholarworks@wm.edu.

Running head: TEACHER BELIEFS AND PRACTICES IN MANAGING STUDENTS
WITH CHALLENGING BEHAVIORS

Relationship Between Teacher Self-efficacy and Use of Evidence-based Practices
in Managing Students with Challenging Behaviors

A Dissertation Proposal

Presented to

The Faculty of the School of Education

The College of William and Mary

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

by

Sheila R. Carr


July 30, 2012


**RELATIONSHIP BETWEEN TEACHER SELF-EFFICACY
AND USE OF EVIDENCE-BASED PRACTICES
IN MANAGING STUDENTS WITH CHALLENGING BEHAVIORS**

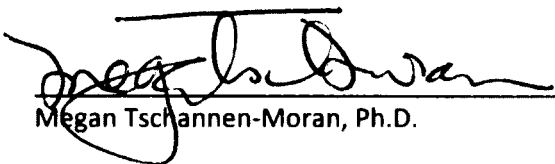
by

Sheila R. Carr

Approved August 2012 by


Sharon H. deFur, Ed.D.
Chairperson of Doctoral Committee


Lori Korinek, Ph.D.


Megan Tschannen-Moran, Ph.D.

Acknowledgements

This study would not have been completed without the patience and support of my loving husband, David. Along with him, I had the unwavering encouragement from colleagues, friends, fellow doctoral students, and family (too many to list by name). Without these “cheerleaders”, this project would have seemed insurmountable. I would also like to acknowledge Beth and Denise for taking time out of their busy lives to edit my drafts along the way. A special note goes out to my friends and neighbors, Debra and Fred for sharing their office so I could work in a quiet, comfortable space without interruption – what a gift! A big thank you to April and Sharon in the W&M technology department for helping me understand the statistics programs. Dr. Tom Ward, fondly dubbed the “spss guru” was also instrumental in helping me decipher my data.

Finally, my dissertation committee members were so genuinely encouraging, supportive, and interested in this study. Dr. Sharon deFur, committee chair, was always available in a moment’s notice and gave me the feedback I needed to move forward in a timely manner. Dr. Megan Tschannen-Moran took time out of her busy schedule to help me understand how to interpret the data always with a smile and words of encouragement. Dr. Lori Korinek’s quiet, thoughtful, and steadfast ways provided me the footing to keep on pressing on. This remarkable team of incredibly intelligent women held me to task, gently but firmly counseled me forward, and never stopped believing in me. From them, I truly learned the power of encouragement and its impact on perseverance. Because of them, I not only studied “efficacy”, I lived and breathed it throughout this project. Their resolute support helped me persist and accomplish my goal to finish this study and contribute to the field of scholarly research in education

Abstract

Given the negative impact of students' challenging behaviors on the learning process, a need exists to gain a more comprehensive understanding of how teachers' beliefs, practices, and knowledge relate to their abilities to effectively manage classroom behaviors. Three-hundred and forty-two (342) public school (PK-12) teachers in a mid-Atlantic state responded to an on-line survey. Data were examined using correlational statistical analysis to measure the relationship between teachers' sense of efficacy (TSE) and use of evidenced-based practices (EBP) in managing students with challenging behaviors, teachers' use of EBP and how they value types/topics of professional development and years of teaching experience. Significant correlations were found between TSE and use of EBP. Moderate correlations were indicated between use of EBP and type or topic of professional development. Years of experience did not correlate significantly with use of EBP in managing students with challenging behaviors. A significant difference was found between special and general educators' use of EBP, with special educators reporting a higher use of EBP. Results inform educators as to what teachers need in order to increase the use of EBP in an effort to effectively manage students with challenging behaviors. Research indicates TSE is enhanced and student outcomes improve.

Keywords: challenging behaviors, classroom management, evidence-based practices, positive behavior supports, professional development, student discipline, students with disabilities, teacher belief, teacher efficacy, teacher preparation, public schools

TABLE OF CONTENTS

CHAPTER I:	7-18
Introduction	7-9
Statement of the Problem	9
Purpose of the Study	9-10
Research Questions	10-11
Significance of the Study	11-12
Legal foundations	12-16
Definition of Terms	16
Limitations and Delimitations	17
Overview of Remaining Chapters	17-18
CHAPTER II: Review of the Literature.....	19-72
Theoretical Foundations of Social Cognitive Theory	19-24
Teacher Self- efficacy	24-27
Measuring TSE	27-31
TSE and teacher type	32-37
TSE and teacher experience	37-43
Professional Knowledge	43-45
Professional development	45-54
Evidence-based Practices	54-59
Applied behavior analysis	59-62
Functional behavior assessments	62-65
Response to intervention	65-67

TEACHER BELIEFS AND PRACTICES IN MANAGING STUDENTS WITH CHALLENGING BEHAVIORS	5
School-wide positive behavior intervention supports	67-70
Recognized evidence-based programs	70-72
Summary	72
CHAPTER III: Methodology.....	73-81
Research Design	73
Research Questions	74-75
Participants	75
Sampling	75
Data Collection	75-76
Instrumentation	76-77
Questionnaire About Teachers and Challenging Behaviors	77
Teachers' Sense of Efficacy Scale (TSES)	77-78
Data Analysis	78-79
Ethical Safeguards	80-81
CHAPTER IV: Results.....	82-103
Response Rate and Demographics	82-83
TSE and EBP	83-85
Factor Analysis of TSE and EBP	85-90
PD Impact by Type and Topic	90-96
EBP and Teacher Experience	96-97
TSE, EBP, and Teacher Type	97-100
Summary	100-103
CHAPTER V: Summary of Findings.....	104-121

Interpretation of Results	107-113
Critique of Study	113-114
Implications of Study	114-118
Recommendations for Future Research	118-119
Summary	119-121
References	122-140
Appendices	141-152
Appendix A. Superintendents' Letter	141
Appendix B. Survey Instrument	142-147
Appendix C. FREE Resource Toolkit	148-150
Appendix D. Research Matrix	151-153

CHAPTER I: Introduction

Numerous research projects and reports indicate that public schools continue to struggle with effectively addressing challenging classroom behaviors (Bushaw & Lopez, 2010; Cheriss, 1993; Fox & Conroy, 2000; Hendrickson, Gable, Conroy, Fox, & Smith, 1999; Provasnik & Dorfman, 2005; Safran & Oswald, 2003; Scott, Nelson, & Zabala, 2003). In 2000, the U.S Surgeon General's office reported the rate of disruptive behavior problems not only continued to escalate, but were growing more severe and complex (U.S. Office of Special Education Programs [OSEP], 2004). A recent Phi Delta Kappa/Gallup poll indicated continued public concerns of consistent trends over the past 40 years with the lack of school discipline and need for more control of behavior (Bushaw & Lopez, 2010). Educators echo this concern saying "the single most request for assistance from teachers is related to behavior and classroom management" (OSEP, 2004, p. 7).

According to Provasnik and Dorfman's (2005) analysis of teacher mobility in the workplace, over 50% named behavior problems as a major contributor to job dissatisfaction. Furthermore, students exhibiting disruptive behaviors that interfere with the learning process place great stress upon teachers, fellow students, and administrators alike (Abidin & Robinson, 2002; Chaplain, 2008; Evers, Gerrichhauzen, & Tomic, 2000; Greenglass, & Burke, 2003; Klassen, 2010; Kokkinos, 2007; Kyriacou, 2001; Nelson, Maculan, Roberts, & Ohlund, 2001). In fact, many teachers claim student discipline problems to be the most difficult and stressful factors in their work environment (Brouwers & Tomic, 2000; Chambers, Henson, & Sienty, 2001). In addition, related research revealed that student disruptive behavior had a significant correlation with

teacher burnout (Brouwers & Tomic, 2000; Chaplain, 2008; Greenglass & Burke, 2003; Klassen, 2010; Kokkinos, 2007; Kyriacou, 2001). Provasnik and Dorfman (2005) report that nearly 45% of the teachers leaving the profession cited student behaviors as the primary reason for quitting. Such reports indicate that “helping students behave in a way that supports learning outcomes and a safe environment continues to be one of the most critical issues facing schools” (Ludlow, 2011, p. 6). Clearly, managing students with challenging classroom behaviors in public schools continues to be an issue that needs to be addressed.

One way of accomplishing the goal of supporting student outcomes while addressing the pressing issue of managing students with challenging behaviors is to provide teachers with the essential tools to positively impact the learning process. Research findings (Abidin & Robinson, 2002; Brownell, Sindelar, Liely, & Danielson, 2010; MacDonald & Speece, 2001; Nelson, Maculan, Roberts, & Ohlund, 2001; Wilson, Floden, & Ferrini-Mundy, 2002) indicate barriers to attaining this goal may be due to teachers’ insufficient knowledge or skills to effectively manage classroom behaviors, inadequate teacher preparation (either pre-service or in-service), a self-perception of being ineffective, or lack of support. It is crucial to equip educators with the necessary tools to effectively manage challenging classroom behaviors. Research by several teams of researchers indicated that as teachers increase their knowledge and develop skills on how to implement evidence-based strategies to effectively manage challenging behaviors, daily practices of classroom management will be positively impacted. Educational leaders need to be cognizant of the knowledge base and skill levels of the teachers in their schools to sufficiently provide them with the essential tools they require to address this

issue (Benner, Nelson, Sanders, & Ralston, 2012; Dunlap & Hieneman, 1999; Evers, Gerrichhauzen, & Tomic, 2000; Sugai, 2004; Sugai & Horner, 2002).

Statement of Problem

Challenging classroom behaviors result in negative learning climates, heightened stress, increased teacher burnout, and an adverse impact on the learning process (Brouwers & Tomic, 2000; Provasnik & Dorfman, 2005; Sugai, 2004; Sugai, Horner, Dunlap, Hieneman, Lewis, Nelson, et al., 2000; Sugai & Horner, 1999, 2002, 2009). Given the ongoing issue of the negative impact of students presenting challenging behaviors on the learning process, a need exists to gain a more comprehensive understanding of how teachers' beliefs, practices, and knowledge relate to their abilities to effectively manage challenging student behaviors.

Moreover, as legal mandates, such as the Elementary and Secondary Education Act (ESEA) and the Individuals with Disabilities Act (IDEA), require more inclusive practices and heightened accountability of all students' outcomes in public schools, including those with challenging behaviors, teachers need to be equipped with the necessary tools to effectively manage their classrooms (Brownell, Sindelar, Liely, & Danielson, 2010; Council for Exceptional Children [CEC], 2010; Evers, Gerrichhauzen, & Tomic, 2000). Enhancing teachers' sense of efficacy (beliefs) coupled with promoting use of evidence-based strategies (practices) will build essential behavior management skills (knowledge) to positively impact learning outcomes for all students.

Purpose of Study

The purpose of this study was to examine the relationship between teachers' self-reported beliefs and their classroom practices along with their professional knowledge of

how to manage students with challenging behaviors. Specifically, the study examined how teachers' sense of efficacy (TSE) correlated with their use of evidence-based practices (EBP) in managing students with challenging classroom behaviors. In addition, the study explored the correlation between teachers' use of EBP and how teachers value types and topics of professional development (PD). The relationship of teachers' use of EBP and years of teaching experience was also investigated. Finally, the study described the difference between general and special education teachers' TSE as well as their use of EBP in managing students with challenging behaviors.

From this study, education leaders and researchers can discern how to offer more targeted and sufficient supports in managing challenging behaviors in both pre-service and in-service programs. Enriching teachers' knowledge of EBP to effectively manage challenging classroom behaviors positively contributes to the teaching profession and improved outcomes for students. Finally, the research knowledge base of teachers' perceptions, beliefs, and practices to effectively manage students with challenging behaviors is enhanced.

Research Questions

Given a survey research instrument, this study used teachers' self-reported beliefs, practices, and experience working with children with challenging behaviors in public schools in a region of a mid-Atlantic state. Teacher beliefs were indicated by their sense of efficacy on how to manage challenging behaviors. Teacher practices were determined by the extent that evidence-based strategies are used in the classroom. Exposure to various types and topics of PD that impact teacher practices to effectively manage students with challenging behaviors is reported. Teacher experience was ascertained by

the reported number of years of teaching. Differences between general and special education teachers were explored with regard to their sense of self-efficacy and use of EBP for managing challenging behaviors. Data gathered addressed the following research questions:

1. What is the relationship between teachers' self-efficacy and their use of evidence-based practices in managing students with challenging behaviors?
2. What is the relationship between teachers' use of evidence-based practices and how they value types and topics of professional development?
3. What is the relationship between teachers' use of evidence-based practices and teacher experience in managing students with challenging behaviors?
4. What is the difference between general and special education teachers and their sense of self-efficacy?
5. What is the difference between general and special education teachers and their use of evidence-based practices?

Significance of Study

Educators continue to struggle to address the problem of effectively managing challenging behaviors in public schools (Brouwers & Tomic, 2000; Chambers, Henson, & Sienty, 2001; CEC, 2010; Ludlow, 2011; Provasnik & Dorfman, 2005). Teachers and schools often rely on exclusionary practices such as removal of students from the learning arena of the classroom to in-school detention or out-of-school suspensions (Amos, 2004; Crisis Prevention Institute [CPI], 2010; Sugai & Horner, 2002). Due to an ever increasing magnitude of students' emotional and behavioral challenges, schools have responded by punitive means such as developing zero tolerance policies, increasing

security through the use of surveillance cameras, and hiring of school resource officers.

This reactive, punitive approach has proven ineffective in changing the intensity or frequency of challenging behaviors that impede the learning process. Although, such practices may remove disruptive students from classrooms temporarily, neither teachers nor students learn the necessary strategies or skills to improve, prevent, or change behaviors for the future.

In order to successfully address challenging behaviors that impedes the learning process, teachers need enhanced management skill sets. This requires providing opportunities for teachers to learn and practice evidence-based strategies that emphasize effective, proactive approaches for managing challenging behaviors. Given an adequate skill set, it is more likely that teachers' sense of efficacy in managing students with challenging behaviors would increase. Research suggests that increased teacher self-efficacy in classroom management is positively correlated with increased confidence, greater positive affect, and fewer disciplinary referrals (Chambers, Henson, & Sienty, 2001; Henson & Chambers, 2002). Research demonstrates that challenging behaviors diminish when student engagement increases related to an improvement of teachers' instructional practices as they effectively implement evidence-based strategies.

Legal foundations. The federal government plays a key role in setting legal precedents that drive legislation or laws. States are charged to operationalize these federal mandates (United States Department of Education [USDOE], 2002, 2004, 2009; OSEP, 2010). State governments interpret the law to develop regulations that serve as guidelines for practitioners. Local Education Agencies (LEA) or school districts must then develop a local governing school board to implement state legal codes which largely

derive from federal statutes or mandates. Finally, LEAs develop local policy and procedures that define and impact how teachers function in schools and classrooms such as expected use of classroom practices and permissible disciplinary actions to include managing students with challenging behaviors.

For educators, two of the most influential administrative rulings that promulgated regulations based upon federal laws are the Elementary and Secondary Education Act (ESEA), previously known as the No Child Left Behind Act or NCLB (USDOE, 2002) and the Individuals with Disabilities Education Act or IDEA (USDOE, 2004). The former primarily addresses accountability and access to public schools while the latter focuses on the educational needs of students with disabilities. Both profoundly influenced the day-to-day function of public schools with regard to teachers' instructional practices, both academically and behaviorally.

The Elementary and Secondary Education Act (ESEA) is based on the premise that all children have a right to learn; the intention of the law was to give more students equal access to succeed (USDOE, 2002). Educators are charged to implement research-based instructional practices, also referred to as evidence-based practices (EBP).

IDEA protects the rights of students with disabilities to receive a free and appropriate public education (FAPE) that is individualized to meet their specific needs (IDEA, 1990; IDEA Amendments, 1997; USDOE, 2004). IDEA requirements for high standards and learner performance are intended to foster high quality teaching and learning, equality of educational opportunity to learn, and improved achievement for children with disabilities (CEC, 2010). In 2004, the reauthorized IDEA (IDEA Improvement Act [IDEIA]) aligning with the mandates of ESEA coupling expanded

access with heightened accountability for all (IDEIA, 2004; USDOE,2004).

To meet the requirements that all students be taught by highly qualified educators, these legal mandates have led to more inclusive practices whereby general and special educators worked side-by-side in co-teaching partnerships teaching a more diverse student population in general education classrooms. According to the CEC (2010), “like never before ESEA and IDEA require special and general educators to work collaboratively to ensure learning gains for all children including children with disabilities” (p. 3). In short, ESEA and IDEA directly impacted both professional knowledge requirements (i.e., all teachers must be highly qualified) as well as teacher practices (i.e., required use of research-based strategies or EBP). CEC (2010) believes “more research on these relationships will help shine a light on the myriad of ways teaching and learning for all students can improve” (p. 10).

Specific to behavioral issues, students with disabilities are afforded additional and specific legal protections beyond those guaranteed for all students. These legal requirements impact all educators. For example, under certain circumstances, the Individualized Education Program (IEP) teams must conduct a Functional Behavior Assessment (FBA) to determine the need for a Behavior Intervention Plan (BIP) in an effort to address the student’s behavioral needs. This includes the use of EBP such as positive behavioral interventions, strategies, and supports to address the behavior. Per regulation, the student “shall receive a FBA and BIP, as appropriate, designed to prevent the behavior from recurring” (34 CFR 300.530(d)).

IDEA imposes these strict procedural requirements on educators to ensure that a student's substantive right to FAPE is met. Further, IDEA stipulates that the student’s

education should occur in the least restrictive environment (LRE). This means that to the extent possible, a student should be educated with typically developing peers. The law further stipulates that removal from the regular classroom should only occur when students cannot succeed in those settings even with additional aids and support services. In short, students with disabilities are afforded additional legal protections under the law regarding behaviors that may be related to their disability which essentially creates an additional discipline system within public schools. This mandate demands much from educators when students present with challenging behaviors in the classroom. To meet the rigor of the legal mandates, teachers must be equipped with the essential knowledge and skills to effectively manage students with challenging behaviors.

Educational leaders and practitioners must be cognizant of these non-negotiable legal mandates when determining how to identify needed supports to enhance teachers' use of EBP and sense of efficacy in the effort to improve student outcomes. "In these days of hard-nosed accountability, teachers' sense of efficacy is an idea that neither researchers nor practitioners can afford to ignore" (Tschannen-Moran & Hoy, 2001, p, 803). Educators need on-going opportunities to increase their professional knowledge, use of EBP, and supports to meet the rigor of the legal mandates while addressing the diverse needs of the ever-changing student population. From a policy perspective, this may require a shift in how teachers think, believe, and behave as public schools respond to the combination of ever-changing legal mandates and student populations.

Enhancing the understanding of how teachers' beliefs and knowledge impact practices of managing students with challenging behaviors helps educational leaders support teachers (McLaughlin & Nolet, 2004). This is crucial in that "second only to

primary caregivers, teachers are the most important adults in the lives of children...and can influence their development, including their behavior to a marked degree” (Liljequist & Renk, 2007, pp. 557-558). Results of this current study in conjunction with relevant research on the topic of TSE as it relates to use of EBP and managing challenging student behaviors provides information on how to effectively plan teacher preparation programs, support educators working in the field, and enhance TSE. Most importantly, it provides data to help teachers improve student outcomes, behaviorally and academically.

Definition of Terms

Challenging behaviors. This refers to “intense behaviors that present physical, instructional, or social concerns to the teacher. Challenging behaviors are demonstrated frequently by a student and are difficult to manage” (Westling, 2010, p. 50). These behaviors disrupt the teaching-learning process. Challenging behavior can include any of the following: defiance, non-compliance, disruption, and verbal aggression.

Perceived self-efficacy. This refers to “beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3).

Professional development. This refers to “programs [that] are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students” (Guskey, 2002, p. 381).

Teacher self-efficacy. Teacher self-efficacy “is the teacher’s belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context” (Tschannen-Moran, Woolfolk, & Hoy, 1998, p. 233).

Limitations and Delimitations

Limitations are potential weaknesses of a study. Simply put, research limitations are things out of the researcher's control. The current study relied on self-reported responses of teachers via an on-line survey instrument. In that responses are unique to each individual, generalization to all teachers may be limited by the very nature that responses are by virtue personal opinions and perceptions. Another limitation of this study may be that it did not explore an exhaustive list of evidence-based practices nor differences between use of effective strategies to manage challenging behaviors between various grade levels.

Delimitations, on the other hand, are things within researcher's control that may affect generalizability of study findings. A delimitation in this study is that the survey response window remained open only for one month. Had it been available for a longer time period, the response rate may have been stronger. In addition, the timing of the survey may have impacted response rates twofold. First, teachers were focused on preparing students for upcoming state-wide testing and so may not have taken the time to complete the survey. Second, many schools were closed for a portion of the survey window due to the scheduling of spring break. As a result, the total sample size may be smaller, thereby reducing the strength of the study. Finally, broader generalization to all teachers working in public schools may be limited in that participants included only educators teaching in a region of public schools in a mid-Atlantic state. Therefore, generalizations outside the school divisions included in this study may be limited.

Overview of Remaining Chapters

In summary, this study examined how TSE correlated with teachers' use of EBP

to effectively manage students with challenging behaviors. In addition, the study explored what features of PD and years of teaching experience impact teachers' use of EBP in effectively managing students with challenging behaviors. Finally, information on differences between general and special education teachers was described with regard to their sense of efficacy and use of EBP for managing challenging behaviors in a selected region of a mid-Atlantic state. The following chapters provide a thorough literature review of the topic, description of methodology for collecting data, results and conclusions from data analysis, and implications for educational leaders, practitioners, and further research.

CHAPTER II: Review of the Literature

Bandura's social cognitive theory (SCT) provides a conceptual model on how an individual's beliefs, knowledge, and behaviors impact his or her ability to manage students with challenging behaviors (Bandura, 1986; 2001). Considering the issue of managing students with challenging behaviors through the lens of Bandura's SCT is logical in that the focus of this study is to examine teachers' sense of efficacy (beliefs), teacher experience (knowledge), and their behaviors (practices). For that reason, the theoretical foundation of Bandura's (1986; 2001) SCT is discussed followed by results of relevant research on teacher self-efficacy, teacher experience and knowledge, and their practices. First, research findings on teacher self-efficacy on how to manage classroom behaviors are provided. Next, professional knowledge in terms of required standards and qualifications are explained. Then, research on various types and topics of PD follows. Finally, recognized evidence-based strategies and commonly recommended practices to effectively address challenging classroom behaviors are reviewed.

Theoretical Foundations of Social Cognitive Theory

Bandura's social cognitive theory (SCT) provides the conceptual framework for this study. This multidimensional model describes how human behavior is motivated by two variables or beliefs. The first, *general outcome expectancy*, is the belief that certain actions will lead to desirable outcomes, and the second is *sense of self-efficacy* or the belief that one is capable of performing certain actions. The former may be associated with teaching self-efficacy while the latter is with personal efficacy and change agency. Henson, Bennett, Sienty, and Chambers (2000) explained how these beliefs are conceptually distinct. For instance, "a teacher may believe that certain actions will lead

to student learning (*outcome expectancy*), but have no confidence in his or her ability to perform those actions (*self-efficacy*)” (p. 5). Bandura proposed that these core beliefs influence behavior patterns, emotional responses, and, ultimately, our actions. In other words, “the basis of motivation is represented with a person’s level of judgments of the relationship between action and outcome” (Celep, 2000, p. 3). As related to this study, the focus is to examine the relationship between teachers’ sense of efficacy or beliefs which drive motivation and their use of evidence-based practices or actions in managing students with challenging behaviors.

Bandura’s dynamic interpretation of human behavior is distinctly in contrast to behaviorists who theorized that all human behaviors were a function of external stimuli. Bandura recognized the complexities of human behavior. He viewed humans as interactive social beings with the capacity to reflect upon experiences and engage in the process of introspection. Furthermore, SCT clearly differed from prior theories of social learning in that it not only embraced humans as social beings, but thinking ones as well. Acknowledging the complex nature of human functioning by emphasizing the importance that cognition plays in the ability to construct reality based upon encoded information and thereby self-regulate or change behaviors led to the concept of triadic reciprocity. Due to the interactive nature of environmental factors (external stimuli), personal factors (cognition, affect, and biology), and behaviors, human functioning could theoretically be changed. In short, “what people think, believe, and feel affects how they behave” (Bandura, 1986, p. 25).

Figure 1. Conceptual Model of Social Cognitive Theory

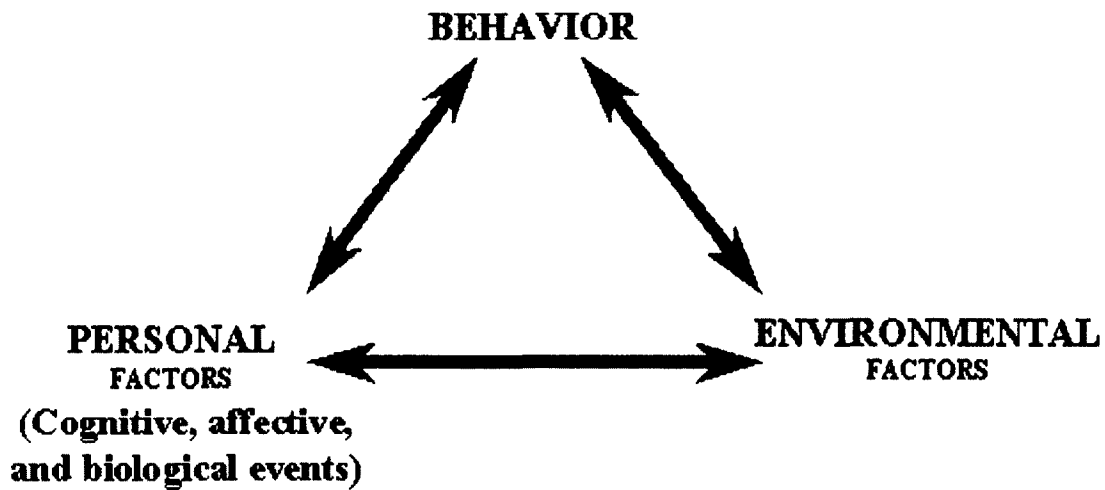


Figure 1. Graphic of Bandura's SCT emphasizing the interactive nature of environmental and personal factors on human behavior. Adapted from *Overview of social cognitive theory and of self-efficacy*.12-8-04 by Pajaras (2002) from <http://www.emory.edu/EDUCATION/mfp/eff.html>

Not only did Bandura's SCT explain how people acquire and maintain certain behavioral patterns, it also provided the basis for intervention strategies (Bandura, 1997). Unlike the behavior theorists' view that relegated humans as mere responders to external stimuli, SCT created a construct wherein individuals could serve as their own change agents. SCT was a marked departure from previous theories on human functioning. Behavior was no longer considered a mere response construct, but something that could be changed through the fundamental human capability of self-reflection. It is through this cognitive process that we humans make sense of the world by reflecting upon our experiences, evaluating our beliefs, exploring alternative ways of thinking, and then making behavioral changes accordingly. In summary, Bandura's SCT redefined humans with the purposeful, cognitive capacity to become their own change agents and engage in self-efficacious actions in an effort to determine their own destinies.

At the core of this theoretical construct is how self-efficacy beliefs are created.

People form their self-efficacy beliefs through four primary sources of input or information. The first, *mastery experience*, is considered to be the most influential source. It refers to one's own interpretation of previous performance. *Vicarious experience* is another source of information to be interpreted and is gleaned via observations of others modeling or performing tasks. This is a particularly powerful influence if the model has similar attribute(s) such as age, gender, or culture. *Social persuasions* are sources of information made by others in the form of verbal judgments (e.g., positive encouragement or negative appraisals). Positive persuasions enhance self-beliefs while negative ones weaken them. *Somatic and emotional states* are expressed by one's reaction to thinking about performing an action (i.e., moods, anxiety, fear, stress, and arousal). Self-efficacy beliefs are improved by reducing negative emotional states. As teachers develop their sense of efficacy in classroom management, it will impact their capacity to respond to students that present challenging behaviors.

These information sources cultivate beliefs, influence judgments, and are expressed in the form of behavior. It is a natural human phenomenon to interpret information from individual and world events. How accurate the interpretations are, however, hinge on perceptions influenced by individual histories or prior experiences, differences or similarities in attributes of others, sense of self-belief, and level of physical and emotional well-being. For instance, even when one attains success, if one interprets the event as a failure due to a prior experience, then the impact on one's sense of self-efficacy may be diminished. If a source of positive influence has a similar attribute such as gender, age, or culture, the interpretation may bolster one's self-efficacy. The person

may think, “If *s/he* can do it, then *I* can too!” Another example may be how much persuasive influence an external source has upon a person. For example, if a parent continually tells an impressionable child how unskilled or untalented *s/he* is, the child will likely consume such statements as being the truth and falsely weaken the child’s sense of self-efficacy. Finally, according to Bandura’s SCT, a healthy physical and emotional state of being void of unfounded fear, anxiety, and stress positively impacts how an individual interprets and gauges responses to experiences.

Pajares’ (2002) summarized the power of self-efficacy with the statement that “belief and reality are seldom perfectly matched, and individuals are typically guided by their beliefs” (pp. 4-5). As a result, what people *believe* about themselves and their accomplishments serves as a stronger predictor of how they will behave than what they know or have actually accomplished. Still, knowledge and skills are not to be dismissed as inconsequential. They are necessary factors in building and establishing self-efficacy in the first place. Researchers have discovered that self-efficacy has consistently proven to be an excellent predictor of behavior. Indeed, more than any other motivational construct as there is a high correlation between self-efficacy beliefs and changing behavior (Pajares, 2002).

First and foremost, teachers must acquire the requisite professional knowledge and skills to exact positive behavioral change. This will entail understanding how behaviors are dependent upon the interplay of personal factors, established behavior patterns, and environmental factors. “Using SCT as a framework, teachers can work to improve their students’ emotional states to correct their faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices

(behavior), and alter the school and classroom structures that may work to undermine student success (environmental factors)” (Pajares, 2002, p. 2). As public schools’ classrooms fill with more and more students exhibiting challenging behaviors, educators will need to be armed with the knowledge, skills, and sense of self-efficacy to exact positive outcomes for students. As such, the concepts of the SCT apply to both students that present challenging behaviors as much as to the adults charged to manage them in an effort to educate all students. In summary, when an individual has appropriate professional knowledge along with consummate skills to put that knowledge into action, coupled with a strong sense of self-efficacy, it is more likely that person will be able to manage challenging situations (Evers, Gerrichhausen, & Tomic, 2000).

Teacher Self-efficacy

Seeking a deeper understanding of TSE has captured the attention of scholars and practitioners for decades. TSE has been associated with positive student outcomes, both academically and behaviorally. TSE has been positively correlated with student motivation, student engagement, teacher competency, reduced teacher burnout, and lower referral rates for special education consideration. According to multiple researchers, teachers with high self-efficacy tend to enjoy teaching more, are better able to manage stress, and are more willing to seek advice or counsel from colleagues. Other characteristics of highly self-efficacious teachers include ability to self-regulate their emotions, control their environment, delay gratification, motivate students, and believe that all students can learn. Finally, they tend to be more enthusiastic, put more effort into meeting the learning needs of their students, and set higher goals for themselves as well as their students (Brouwers & Tomic, 2000; Chambers, Henson, & Sienty, 2001; Evers,

Gerrichhauzen, & Tomic, 2000; Gibson & Dembo, 1984; Hoy, 2000; Mergler & Tangen, 2010; Ross & Bruce, 2007; Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2001). Study of TSE merits continued attention in its capacity to impact positive student outcomes. The inherent implication is that by supporting and enhancing TSE, not only are student outcomes improved, but teacher practices are positively impacted as well.

Baker (2005) found that highly self-efficacious teachers are more capable of handling diverse groups of students, including those with disabilities and significant behavior problems. In fact, studies have revealed that highly self-efficacious teachers are more effective with classroom management than ones with low self-efficacy (Chambers, Henson, & Sienty, 2001; Gordon, 2001; Henson, 2001a). Gordon (2001) compared high to low efficacy elementary teachers using a combination of quantitative (survey) and qualitative (interviews) methodologies. Results of Gordon's (2001) study showed that teachers considered to be highly efficacious expected students' behaviors to improve, were less likely to internalize feelings about misbehavior (e.g., anger, embarrassment, guilt), liked students even though they disrupted the learning process, were proactive, and used fewer negative consequences or punishments. Such teachers were more effective in classroom management. As a result, they tended to be less stressed, have better relationships with colleagues including supervisors, and had greater job satisfaction. Conversely, characteristics of low efficacy teachers were directly inverse to their high efficacious counterparts. Low efficacy teachers tended to be pessimistic, negative, judgmental, insecure, reactive, punitive and ultimately less effective both instructionally and in classroom management.

Brouweres and Tomic's (2000) longitudinal study focused on the issue of teacher

burnout as it related to teacher efficacy in managing students with challenging behaviors. Their participants consisted of secondary level teachers in the Netherlands. Sample size was sufficient with the first survey completed by 558 respondents in October and 243 of those same teachers surveyed again the following March. They reported that two core traits of teacher burnout (emotional exhaustion and depersonalization) significantly impacted perceived self-efficacy in classroom management. However, the traits have inverse relationships to self-efficacy. According to Bouwers and Tomic (2000), “the more emotionally exhausted teachers are, the poorer their performances will generally be” (p. 248). Therefore, they claim that emotional exhaustion leads to lower self-efficacy. This claim was made upon the premise that teachers base their self-efficacy beliefs on their performances. Consequently, low self-efficacy leads to heightened depersonalization. As a result, teachers might become cynical, cold, and distant, developing negative attitudes toward disruptive students. The authors reported that as a consequence, teachers deem themselves to be ineffective in managing students with challenging behaviors. So, their claim was that as teachers’ emotional exhaustion increases, their self-efficacy diminishes. Subsequently, as self-efficacy decreases, depersonalization increases and rendered teachers ineffective in managing students with challenging behaviors.

An interesting feature of the group sampled was that they averaged over 20 years of teaching experience. On its face, it would appear burnout is not an issue for this group of teachers since they have stayed in the profession so long. Further, Brouwers and Tomic (2000) did not entertain the possibility that teachers may have been on the verge of burnout due to their number of years in the field. In fact, Tomic posits with fellow

colleagues in another study that “newcomers in human professions do not suffer from burnout,” that “results from various studies underlie the fact that burnout should be looked upon as a process,” and “in literature there is little or no support for the opinion that burnout is to be viewed as a situation” (Evers, Gerrichhauzen, & Tomic, 2000, p. 8). Important in the review of this study is that the time between surveys was only five months challenging the authors claim that their study was longitudinal.

Evers et al. (2000) conducted a feasibility study on the relationship between teacher burnout and self-efficacy. Their goal was to develop an intervention program based on self-efficacy to prevent teacher burnout in secondary level teachers. This study was a synthesis of previous studies. The authors outlined three main constructs for consideration in program development: burnout, teacher burnout, and self-efficacy. They concluded their study stating an intervention program is important “because of the predictive power of the self-efficacy theory in reducing burnout among teachers” (Evers et al., 2000, p. 34). The authors made a compelling argument for the need to develop programs to prevent teacher burnout, yet the conclusions are flawed by the lack of a clear intervention plan. This review presented a logical case for developing prevention plans to reduce teacher burnout and maintain self-efficacy.

Measuring TSE. Gibson and Dembo (1984) developed a Teacher Efficacy Scale (TES) as part of their study to create an empirical data collection instrument to measure teacher efficacy. Findings indicated many positive attributes linking teacher efficacy to teacher effectiveness and positive student outcomes. As a result, the TES instrument became the predominant, standard research measure of teacher efficacy. In subsequent years, other researchers challenged the validity of the TSE measure arguing that the

subscales of the instrument did not reflect the self-efficacy and outcome expectancy dimensions of Bandura's (1997) SCT. Tschannen-Moran et al. (1998) critiqued the TSE and offered an alternative measure of teacher efficacy.

In 1998, Tschannen-Moran, Woolfolk, and Hoy conducted a thorough review of prior research on the topic of TSE. Their purpose was multi-faceted. Overall, they set out to clarify the construct of efficacy and to improve upon its measures. More specifically, they wanted to find out how stable the construct of TSE was over time, across settings or contexts, and the impact it had on teaching practices (Tschannen-Moran et al., 1998). Their rationale was "the conceptual confusion around the concept of teacher efficacy has made finding appropriate measures of efficacy difficult" (Tschannen-Moran et al., 1998, p. 219). The authors stated argued that in order to fully understand this *thorny* construct, a contingency or means-end relationship about the requirements of the teaching *task* must be considered (Tschannen-Moran et al., 1998). Indeed, Tschannen-Moran et al. (1998) defined teacher efficacy as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233). In short, to capture this relationship, a measurement tool was needed to focus on the outcomes (ends) individual teachers could expect to attain given certain actions (means) they felt capable of delivering. As a result, they proposed an integrated, two dimensional model of teacher efficacy. That is, the requirement of the teaching task (context) must be analyzed along with an assessment of personal teaching competencies in the form of strengths and weaknesses related to those specific tasks (Tschannen-Moran et al., 1998). Therefore, a new measure needed to examine the effects of context on teacher efficacy.

Tschannen-Moran et al. (1998) claimed that “in order to be useful and generalizable, measures of teacher efficacy need to tap teachers’ assessment of their competencies across a wide range of activities and tasks they are asked to perform” (p. 219). The challenge appeared to be with finding a proper balance between specificity and generality. In other words, if too specific, the measure lost its predictive power. If too general, generalizability to other contexts (i.e., grade level, subject content) could not be made with confidence. Further, based upon the ample review of the literature, teacher efficacy was found to be related to school climate, opportunities for collaboration among adults, principal leadership, coaching, and shared decision making. In addition, “teacher efficacy appears to influence student achievement, attitude, and affective growth” (Tschannen-Moran et al., 1998, p. 215). All are just a few of the powerful reasons for developing a more accurate measure of teacher efficacy.

Henson’s (2001a) historical review of teacher efficacy research challenged the use of teacher efficacy measurement and instruments being used in the field. Henson (2001a) identified many points to consider when developing TSE measurement instruments such as: more empirical evidence (e.g., direct observations) versus use of teacher self-reported sources (e.g., surveys); greater rigor in analyzing and determining presence of significant TSE factors to include parallel analysis or higher-order analyses over use of scree plots and eigenvalues greater than one rule; use of confirmatory factor analytic strategies to accurately measure differences in variances across samples, need to test rival structures within data, and challenge various hypotheses versus over-reliance on theoretical constructs. In short, Henson claimed “the study of teacher efficacy has suffered from poor construct validity issues” (2001a, p. 17). In the effort to advance research

methodologies that yield more reliable and valid scores, maximizing empirically-based methodologies will strengthen the measure of this elusive construct.

Subsequent research by Tschannen-Moran and Hoy (2001) did just that. They developed a more refined measure of TSE that focused upon teacher competencies within the context of the teaching task. In their quest to develop a more valid and reliable measure of TSE, they discovered that TSE weighed heavily on three essential factors: instructional strategies, classroom management, and student engagement (Tschannen-Moran & Hoy, 2001). Further, their revised instrument produced a total TSE score - using either the long or short form - that proved to have high reliability. The researchers did note, however, that the total TSE score was a more valid gauge for pre-service teachers than for those already working in the field. Tschannen-Moran and Hoy (2001) explained this phenomenon based upon the premise that “subscale scores may have little meaning for prospective teachers who have yet to assume real teaching responsibilities” (p. 801). Most importantly, their extensive research advanced the concept that TSE was a valid construct and acknowledged the complex tasks of teaching within the three dimensions mentioned above.

In an effort to design a more valid and reliable instrument to measure TSE, Tschannen-Moran and Hoy (2001) conducted three studies using a new measure, namely the *Ohio State Teacher Efficacy Scale* (OSTES). The first study involved 224 college students, the majority of which were pre-service teachers (65%); the remaining 35% were in-service teachers. The participants were varied in gender, age, and race. Using factor analysis and a series of rigorous tests, the original 52-item instrument was reduced to 32 items for the subsequent study.

The second study sample group was of similar size (N=217) and demographics with pre-service (32%) and in-service (68%) teachers. The major difference in this sample group was that they were comprised of students from three different universities versus just from Ohio State. The 32-item instrument was again put through rigorous factor analysis tests reducing it to 18 items. Construct validity was assessed with strong results. Three TSE factors emerged as “sound representations of the various tasks of teaching” (p. 798): classroom management, instructional strategies, and student engagement. Still, concerns remained with regard to the relative weakness of the classroom management factor. A third study was done to discover a way to bolster that factor while maintaining the strength of the other two.

The third and final study was conducted with a larger sample group of 410 teachers including pre-service (25%), in-service (62%), and service level not indicated (9%) from the same three universities plus volunteers (4%) from four schools of various grade levels. As a result, a long (24 items) and a short (12 items) TSE form were created. Two more factor analysis tests were completed followed by another construct validity assessment. Tschannen-Moran and Hoy (2001) found both instruments to have reasonable validity with the three factors holding strong as reliable measures of TSE.

The sample size and magnitude of the three series study was sufficient. The rigor of both the factor analysis and construct validity assessments appears to be more than adequate. However, researchers such as Henson (2001a) may differ. Henson (2001a) argued that there were many points to consider when developing TSE measurement instruments. One is a need for greater rigor in analyzing and determining presence of significant TSE factors.

TSE and teacher type. Multiple researchers have compared special educators and general educators on their ability to effectively manage difficult classroom behaviors (Almog & Schechtman, 2001; Baker, 2005; Liljequist & Renk, 2007; Lopes, Montiero, & Sil, 2004; Westling, 2010). One such study by Liljequist and Renk (2007) examined teachers' perceptions of how bothered they were by students' challenging behaviors as related to their own efficacy and how they rated their students' ability to control behaviors. Ninety-nine education graduate students with an average of just over eight years of teaching experience were surveyed. The majority of them were special educators (65%) with 35% of them working as general education teachers. Their findings, supported by previous ones, found that both general and special education teachers were equally bothered by overt behaviors (e.g., non-compliance, refusal) versus internalized ones (e.g., depression, social withdrawal, anxiety) because the former were considered to be more intrusive to classroom routines. In other words, "general education teachers and special education teachers did not differ in their ratings of students' internalizing [*sic*] ($t = -1.08, p < .28$) or externalizing [*sic*] ($t = -1.01, p < .32$) behavioural [*sic*] problems or in their ratings of being bothered by students' internalising [*sic*] ($t = -.92, p < .36$) or externalizing [*sic*] ($t = -.44, p < .66$) behavioural [*sic*] problems" (Liljequist & Renk, 2007, p. 564). These researchers also found that both teacher types expressed a perception that externalizing behaviors were within the students' control unlike internalized ones.

The researchers warned that external validity may be limited in that all participants were part of a convenience sample involving a somewhat captive audience of graduate students attending a large southeastern university in the USA (Liljequist &

Renk, 2007). Furthermore, the sampling selection process was not as random as it could have been. As a result, the sample may be somewhat biased. Nonetheless, their findings contribute to understanding how teacher efficacy translates into teacher behavior when managing students with challenging behaviors. That is, teachers with a high sense of efficacy, regardless of teacher type, were equally bothered by externalized challenging behaviors on the merit that they are intrusive to the learning process for which they take responsibility. In addition, highly efficacious teachers found internalized challenging behaviors such as depression or being withdrawn equally bothersome because of their own inability to effect change their students.

Lopes et al. (2004) conducted a similar study comparing special and general educators and found no difference in their sense of general efficacy, but noted a difference in their sense of teacher efficacy. In other words, both general and special education teachers at all grade levels agreed that students with challenging behaviors would not be successful without specialized supports. However, according to Lopes et al. (2004), “the groups differed on whether they believed that social/emotional needs of difficult students can be fulfilled in regular classrooms” (p. 402). In fact, the general education teachers reportedly were more optimistic than the special education teachers. This was largely attributed to the lack of resources coupled with limited knowledge of newer special education teachers who were not adequately prepared to work with students exhibiting challenging behaviors. Further, both types of teachers reported that their sense of self-efficacy diminished as the students grew older. An interesting result of this study is not disparity between teacher types, but between primary and secondary teachers. Secondary teachers expressed more negative feelings toward teaching students

that presented challenging behaviors, irrespective of the teacher type.

Researchers Lopes et al. (2004) surveyed an adequate sample size of 430 teachers in Portugal (79% general educators, 21% special educators) working with students ranging from grades one to nine. They qualified their results noting that full inclusion is a policy requirement mandated by the Ministry of Education in Portugal which may have largely influenced the outcomes in that there is little difference between teacher type because both are charged with the task of teaching students with challenging behaviors in general education settings. In fact, the authors note that such students in the recent past would have been removed from those settings prior to the policy mandate.

Baker's (2005) findings were similar with regard to grade level taught in that "secondary educators reported being significantly less able, willing, and ready to manage challenging student behaviors than their colleagues at lower grade levels" (p. 1). One possible explanation offered by Baker (2005) is that the lower-level teachers deal with fewer children and have more time to address students with difficult behaviors. Baker (2005) found that general educators were more optimistic with regard to managing difficult students as long as the special educator remained in the inclusive general education setting. In addition, general educators considered the special education teachers to be primarily responsible for the students identified as having special needs. Like the previous study by Lopes et al. (2004), Baker's (2005) results suggest that general education teachers did not feel that they were very effective without their special educator counterpart in the classroom when it came to managing challenging behaviors.

Baker's (2005) sample size was strong with 345 teachers in Ohio responding to a survey with equal representation across grade levels. More special educators (82%)

participated than did general educators (18%) with half of them reporting more than 15 years of experience. Although Baker's (2005) study found a strong relationship between teachers' perceived self-efficacy and their readiness to manage students with challenging behaviors ($r = .57$), there was no report on differences between teachers by type. Baker (2005) found that regardless of level taught or teacher type (special versus general education), as TSE for managing challenging behaviors increased, so did their overall readiness and willingness to use specific behavior management techniques.

Another related study by Almog and Schechtman (2001) focused on special educators' efficacy beliefs and their actual coping strategies in managing challenging behaviors in classroom settings. The teachers in the Almog and Schechtman (2001) study were working in inclusive classrooms and collaborating with general educators at the elementary level (grades 1 – 3) in Israel. The researchers used a mixed methodology which included classroom observations, teacher interviews, and surveys. Findings indicated a gap between what teachers reported to be a belief (e.g., preference for helpful strategies) versus actual practice (e.g., restrictive or punitive responses). Data collected indicated that, even when teachers had sufficient knowledge of helpful approaches to effectively manage challenging classroom behaviors, they did not use that knowledge in real classroom situations. Results of this study suggested that teachers experienced difficulty in bridging the gap between theory and practice when it comes to effective classroom management. However, these results should be evaluated with caution as the sample size was quite small ($N=33$) and cultural influences may limit generalizability to other teacher groups. Still, the findings underscore the necessity to prepare and provide teachers with the skills to bring theory into practice when developing and refining skills

to effectively manage challenging classroom behaviors.

Westling (2010) initially attempted to recruit teacher volunteers from 21 public schools and offered ten dollars as an enticement to respond. He received 32 responses with 30 of those teachers completing the survey. Because of the low response rate, Westling (2010) then accessed a database of 402 teachers asking them to participate for a twenty dollar compensation. Fifty-three teachers responded with 40 of those teachers completing the survey. Westling (2010) surveyed those 70 teachers asking 38 special and 32 general educators to describe several traits and conditions about themselves and their students with challenging behavior. Results indicated that most teachers did not use many effective strategies or receive sufficient support. Regardless of teacher type, all viewed challenging behavior as having an adverse effect on themselves, their students, and the learning process.

Although statistical significance could not be ascertained as results were reported by percentage only, an interesting difference between teacher types was that more special educators attributed students' challenging behaviors to internal factors (disability or physical/medical reasons), whereas general educators agreed that behaviors came from external sources (home or community environments). The majority of respondents, irrespective of type, believed most challenging behavior was learned and could be improved.

Westling (2010) found "only one variable had a slight predictive relationship to the effect of challenging behavior, and that was teacher type" (p. 60). In other words, special educators reported fewer adverse effects on them due to challenging behaviors compared to their general education counterparts. This was indicated by the percentage

reporting that students' challenging behaviors made them think about quitting (Special Educators = 11%, General Educators = 44%).

Finally, Westling (2010) reported that both teacher types perceived their professional preparation to be inadequate in preparing them to effectively manage students with challenging behaviors. Yet, results indicated that in-service and pre-service preparation were predictive of teacher confidence and use of evidenced-based strategies for addressing challenging behavior. As Almog and Schechtman (2001) implied, there is a need to bridge the gap between theory and practice in adequately preparing all teachers to effectively manage challenging behaviors.

The generalizability of Westling's (2010) study is somewhat compromised by a small, nonrandom, convenience sample. In addition, the use of surveys or questionnaires have the inherent limitation of relying on participants' self-reports. Additionally, Westling (2010) indicated that the data collection instrument used in his study should have included means to gather information on frequency and intensity of challenging behaviors as well as specific content (type and topic) of professional development received.

TSE and teacher experience. Prospective teachers are naturally not as confident in their teaching abilities compared to experienced teachers (Baker, 2005; Hoy, 2000; O'Neill & Stephenson, 2012). Tschannen-Moran et al. (1998) described this phenomenon as "helping teachers develop strong efficacy beliefs early in their career will pay lasting dividends" (p. 234). The construct of teaching efficacy appears to solidify over time. Once established, beliefs about task and competence tend to remain stable over time unless new demands compel the teacher to re-evaluate either the task or context

(Tschannen-Moran et al., 1998).

Several studies have focused on the efficacy level of pre-service or novice teachers indicating that they are highly self-efficacious while actively engaging in coursework, but that efficacy diminishes somewhat when they face the reality of the multi-faceted demands of the real life duties of a classroom teacher (Henson, 2001b; Hoy, 2000; Kotaman, 2010; Mergler & Tangen, 2010; O'Neill & Stephenson, 2012; Swackhamer, Koellner, Basile, & Kimbrough, 2009; & Yılmaz & Çavaş, 2008).

Henson (2001b) found a positive correlation between self-efficacious student teachers and classroom management skills. An interesting finding in Henson's study was that pre-service teachers tend to attribute difficulty or failure in students' learning to external factors (e.g., home environment or low motivation) verses taking on the responsibility themselves. Henson (2001b) states this finding may not be surprising when one considers that pre-service teachers are novices and not likely to be confident enough to take on the full burden of their students' failure.

Henson (2001b) suggested this study may inform the field of a need for specific professional development and/or focus of pre-service programs centered on skill development, self-awareness, and self-reflective practices with regard to effective classroom management. In short, Henson (2001b) shared that professional development, pre-service or in-service, should provide mastery experiences in the form of hands-on, real life situations in classroom management as they are considered to be the most influential source for developing efficacy.

Kotaman's (2010) study, conducted in Turkey with 389 early childhood teachers, compared 146 prospective (pre-service) to 243 practicing (in-service) teachers' sense of

efficacy. The pre-service teachers were from two universities whereas the in-service teachers were serving across 76 schools in five major cities. Most were females in both groups and the pre-service group averaged 23 years of age. It is interesting to note that nearly half of the in-service teachers had only one to five years of experience. Both groups responded to a Turkish version of Tschannen-Moran and Hoy's (2001) TSES, long form. Results of Kotaman's (2010) study indicated that both prospective teachers and experienced ones scored moderately high with mean scores above seven in relation to all areas of teacher efficacy (i.e., student engagement, instructional strategies, and classroom management) including the total TSE score. Practicing teachers scored significantly higher in terms of TSE than their prospective teacher peers at the .05 level. However, no significant differences were found among experienced teachers.

Kotaman (2010) did a thorough pilot study to validate the reliability of the Turkish version of the TSES. Over 600 pre-service teachers from six different universities participated with very strong results. As measured by the Chronbach's Alpha, each dimension as well as the total TSE scored very high indicating strong internal consistency (student engagement $\alpha = .82$; instructional strategies $\alpha = .86$; classroom management $\alpha = .84$; total TSE $\alpha = .93$). ANOVA statistical analysis was done followed by a Scheffe post hoc analysis. Data were reported in easily readable format with ample information. Kotaman (2010) qualified the higher scores in comparison to previous studies with elementary and secondary teachers saying, "the early childhood classroom environments and applications are less formal and more flexible than elementary and higher education" (p. 612). In turn, teachers have greater control which may contribute to an increase in TSE. This study had a large, random sample size,

utilized valid instrumentation and methodology, appears to be statistically sound, and could be easily replicated.

Hoy's (2000) longitudinal study measured the efficacy of prospective and novice teachers at three points in time: at the beginning of the preparation program, at the end of student teaching, and after their first year of teaching. The original sample totaled 53 participants of which 29 were included in the third time sampling after completing their first year of teaching. Using three valid rating scales, participants were asked to respond at three different times. Results indicated various levels of efficacy. Efficacy rose during the pre-service years and then fell as teachers hit the reality of the teaching profession. One of the three rating scales reported teacher efficacy remained at the same level throughout the longitudinal study period. Hoy (2000) summarizes that this was due to gradual immersion into the profession. There was a high correlation between sustained supports in the field and levels of efficacy. Not surprisingly, this suggests that teachers, particularly in their early years, benefit from adequate supports until they gain confidence in their teaching skills. Although Hoy's (2000) random sample size was relatively small ($N = 29$ to 53), all three survey instruments used had high internal reliability. Scores were expressed in r correlations with means, standard deviation, reliability scores, and intercorrelations at the $p > .05$ and $p > .01$ levels of statistical significance. Methodology was sufficiently described for replication (i.e., Principal axis factoring, Kaiser's criterion of eigenvalue greater than one, and Catell's scree test).

Mergler and Tangen (2010) conducted a longitudinal study examining self-efficacy of pre-service teachers. Their sample size was much greater than Hoy's (2000) with an initial $N=315$ and subsequently 208 participants surveyed. Unlike Hoy's (2000)

study, Mergler and Tangen's (2010) studied postgraduate students in Australia, included qualitative methodology in the form of interviews, and linked teacher efficacy with a specific assessment tool called microteaching. Like Hoy's (2000) study, results indicated that efficacy increased significantly over time in both classroom management and personal teacher efficacy. Mergler and Tangen (2010) referenced Bandura's SCT saying that "teacher efficacy is an extension of self-efficacy which relates to individuals' judgments about their capabilities to execute behaviours [sic] needed to produce or attain designated teaching outcomes" (p. 199). Novice teachers will likely increase their sense of teaching efficacy from practicing (*mastery experience*), observing (*vicarious experiences*), and getting feedback (*social persuasion*) from experienced teachers. Mergler and Tangen (2010) found one means of effectively providing this opportunity for pre-service teachers was through micro-teaching where they planned and delivered mini-lessons to peers. This is a means to offer an opportunity for novice teachers to bridge the gap between theory and practice as suggested by Almog and Schechtman (2001).

Evers et al. (2000) found the same to be true for experienced secondary teachers. Their hands-on approach, also referred to as micro- training, involved planning and delivering mini-lesson to peers during coursework followed by immediate feedback and self-reflection and correlated positively with increased teacher efficacy. This method had been widely used in Holland. The researchers reported a surprising finding in that those who used this technique via internet reported higher efficacy than those that were in face-to-face classes.

Yilmaz and Çavaş (2008) examined the impact of practice teaching in the content area of science with 185 Turkish pre-service elementary teachers. They used a pre/post-

test survey method to measure efficacy as it related specifically to teaching science.

They found that pre-service teachers' experiences directly impact their attitudes toward classroom management. However, experience did not significantly influence their sense of efficacy with regard to subject matter.

Swackhamer, Koellner, Basile, and Kimbrough (2009) found a lower personal efficacy with experienced middle school teachers who do not believe they can provide adequate instruction. These teachers attributed a lower sense of efficacy to their own shortcomings regarding their level of content knowledge. Swackhamer et al. (2009) five-year project results showed a strong correlation between teacher outcome efficacy and increased content specific knowledge (in this case, math and science) with experienced teachers. This study suggests that pre-service programs need to emphasize content rich curricula with pedagogical emphasis to positively impact teacher efficacy. Yilmaz and Çavaş (2008) and Swackhamer et al. (2009) agree that both content knowledge and classroom management are integral components of effective pre-service programs if programs plan to increase levels of outcome expectancy for emerging teachers.

A recent study by O'Neill and Stephenson (2012) explored the TSE of Australian pre-service teachers. A total of 573 pre-service teachers in their fourth year of preparation, most of whom were female (88%) with approximately half between the ages of 22 to 25 years, responded to an on-line survey. Two scales were used, one being Tschannen-Moran and Hoy's 24-item Teacher Sense of Efficacy Scale (TSES). A second scale, Teaching Efficacy Sources Inventory (TESI), was also used. Both claim excellent internal consistency reliability with Chronbach's Alpha scores of .94 to .97 and .72 to .79, respectively.

O'Neill and Stephenson (2012) found consistency with other studies in that pre-service teachers reported a healthy level of TSE with significant differences by gender. Highest items centered around teacher-controlled tasks (e.g., making expectations clear) over student-centered ones (e.g., getting through to the most difficult students). An interesting finding was that teachers did not differentiate between the three TSE factors identified by Tschannen-Moran and Hoy (2001). O'Neill and Stephenson (2012) rationalized this result as a lack of experience. Their study revealed that pre-service teachers assess their TSE using four distinct sources with enactive mastery experiences/verbal persuasion showing the highest mean score. However, the personal qualities component was found to be the best predictor of TSE. This component included items such as sense of humor, communication style, personal effort, and ability to perceive students' needs.

Not only was the sample size sufficient, sound methodology was utilized in this study. The researchers used valid and reliable TSE measures coupled with multiple data analyses: factor analysis with eigenvalue greater than one, scree plot examination, and parallel analysis. O'Neill and Stephenson (2012) stated that "a lack of coursework preparation in managing challenging behaviours [sic] may contribute to low efficacy scores" (p. 7). Furthermore, university pre-service programs were reported to be less than adequate for preparing novice teachers to effectively manage students with challenging behaviors as well as those identified with special needs.

Professional Knowledge

The National Council of Accreditation of Teacher Education (NCATE), founded in 1954, is recognized as the governing board that sets the professional standards for

educators across the nation. In 2008, NCATE made the pledge “that all children be taught by well-prepared teachers, then no child will be left behind and social justice will be advanced” (p. 7). They set minimum standards for teacher preparation programs as well as post-graduate ones. This national organization has adopted the CEC standards for special education teachers.

Like NCATE, CEC sets standards for special education teachers, both pre-service and in the field. For teachers already certified and working in the field, CEC recognizes that, although the law requires use of evidence-based practices in their classrooms, there are no established criteria for them in the field of education. CEC is taking the lead on this issue by identifying such practices and giving teachers access to essential tools through their EBP initiatives.

In 2007, CEC organized a team of researchers to tackle the task of developing a systematic approach to analyzing and determining EBP for special educators for both instruction and behavior. Special educators and leaders look to the CEC for guidance on defining EBP as well as determining effective interventions based upon individual student needs (CEC, 2010b). In order to adequately support teachers in the field to promote positive student outcomes, it will be important to know what means of continued education are most effective in expanding teachers’ use of EBP in managing students with challenging behaviors.

Brownell et al. (2010) posits that a new model is needed for special education teachers’ preparation programs and performance competencies. They argue that, due to changes in federal policy (e.g., Response to Intervention (RtI); Highly Qualified Teachers (HQT), there will need to be a “shift in thinking about how to prepare quality special

education teachers and the expertise they need to be effective. Special education teachers must master an increasingly complex knowledge base and sophisticated repertoire of instructional practices. The authors contend that pre-service preparation is inadequate for this purpose” (Brownell et al., 2010, p. 2). Similar concerns will certainly be an issue with regard to classroom practices for teachers working in the field as they will need to acquire the necessary skills and qualifications to meet the legal mandates. Not only will the topic of PD be important, but also the type of PD to have lasting impact on supporting teachers to effectively manage students with challenging behaviors.

Professional development. Guskey (2002) defines PD as “programs [that] are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students” (p. 381). Based upon the premise that positive student outcomes hinge, largely, on teacher qualifications and effectiveness, enhancing teachers’ professional knowledge through PD is of major concern (National Staff Development Council [NSDC] (2009). Garet, Porter, Desimone, Birman, and Yoon (2001) claim “the continual deepening of knowledge and skills is an integral part of any profession” (p. 916). For teachers, this entails the belief that participating in PD will expand their knowledge and skills, help them grow professionally, and make them more effective as measured by student outcomes (Guskey, 2002).

Overall, researchers and experts in the field agree with Bredeson (2006) in that “teacher professional development is critical to systemic educational reform and school improvement focused on enhancing learning outcomes for all children in public education” (p. 64). Unfortunately, not until this last decade has there been substantial

empirical data on what constitutes effective PD (Garet et al., 2001; NSDC, 2009; Wilson & Berne, 2009). Several studies have emerged, however, with inconsistent findings.

This may in part be due to varied methodologies (e.g., descriptive versus quantitative) coupled with the inherent differences among teachers, schools, and systems.

Nonetheless, some common themes emerged with regard to the essential core features of effective PD for improving teacher practices.

In 2007, Ross and Bruce designed a PD program in an effort to increase TSE of mathematic teachers. They conducted a randomized field trial with 106 sixth grade math teachers in a Canadian school division. Teachers were randomly assigned to either the control or treatment group. The treatment group received PD during the fall of the year (Sept. – Dec.) whereas the control group received the same PD at the end of the study in the spring (Jan. – April). Both groups were administered an adapted version of the TSES two weeks before and two weeks after the PD event. The PD sessions were provided in one full-day event followed by three, two-hour after-school sessions. They found the PD program had a statistically significant effect on teachers' confidence in classroom management, but only a slight increase for student engagement and use of instructional strategies.

The timing of the treatment may have created some internal validity issues in that the teachers were all working in the same school division. For instance, teachers may well have communicated with one another throughout the school year and learned from their colleagues that a PD opportunity was being provided to a select group. If the PD program (treatment) was deemed to be desirable, then it could possibly have resulted in the *John Henry Effect*. That is, compensatory rivalry is created whereby the control

group performs beyond usual levels as they perceive they are in competition with the treatment group. A more likely threat, however, is *experimental treatment diffusion* where teachers share what they are doing even to the point of sharing materials. As a result, the treatment “diffuses” to the control group. This would be particularly true if a treatment teacher was co-teaching with a control teacher and that the PD model required teachers to apply what they learned in their daily instruction.

Another point to consider is that the researchers modified Tschannen-Moran and Hoy’s TSES by adapting it specifically for mathematics teaching and used a 5 point versus 9-point Likert-type scale. This may have changed the validity and/or reliability of the instrument. They did control for teachers becoming “test-wise” by randomly selecting the groups, but since they gave the teachers the exact same instrument, this internal threat to validity was possible. Ross and Bruce (2007) may have effectively controlled for this by confusing the teachers in giving other measures of teacher efficacy at the same time of the pre-test.

Another study of types of PD was conducted by Dunst, Trivette, and Deal in 2011. They examined the extent to which three types of PD influenced practitioners’ beliefs about intervention practices training. The three types of PD were conference presentations, workshops (single or multi-day), an on-site training (field-based and enhanced field-based). Field-based involved only visiting or observing other programs, whereas enhanced field-based training actively included participants in the implementation of the practice. Participants were 473 volunteers, randomly selected, of which the majority worked in the field of education (41%). Others included practitioners in the field of social work/psychology (20%), therapists (16%), and health-related

professionals (7%). The training topic was family-systems assessment and intervention practices. The study was conducted over a period of five years.

Participants were given a 14-item survey to evaluate the training they received. The instrument focused on two points: usefulness of the training and assessed changes in practitioner abilities. Factor analysis produced a single item with high internal consistency ($\alpha = .95$) accounting for 77% of the variance. Multiple analyses were then done to ascertain the influence of the training type on their usefulness and ability. The impact of enhanced field-based training far outweighed any other type of training in terms of influencing both usefulness and ability. Enhanced field-based training was found to be superior to all other types. Dunst et al. (2011) attributed this to the fact that this type of PD provides multiple, hands-on, real life opportunities to apply practices. An interesting finding of this study was that the number of hours or duration of PD was not as influential as the type of training.

There were no significant limitations to this study. Sample size and length of study was more than adequate. Multiple analyses appeared to be thorough. The only obvious and relative weakness of the study was the use of self-reported judgments of participants. In closing, Dunst et al. (2011) claimed their results were consistent with prior research “indicating that multiple training opportunities afforded over time contribute to optimal learner benefits” (Trivette et al., 2009b), and “are central to contemporary thinking on distributed adult education and learning” (Oblinger, Barone, & Hawkins, 2001; Lea & Nicoll, 2002) (p. 192).

Coaching and mentoring have been popular forms of PD in education, however, the National Staff Development Council (NSDC) reported that the USA PD for teachers

“lacks intensity, follow-up, and usefulness” (NSDC, 2009, p. 1). Most public schools have some type of mentoring program for new teachers. Coaching has gained favor as an effective type of continuing PD in that it provides active participation, organizational supports, time for reflection, opportunities to practice in the classroom, and apply new knowledge and skills in real life situations (Guskey, 2002; NSDC, 2009). Kretlow and Batholomew (2010) systematically reviewed several studies on coaching finding it to be “a promising practice for promoting high fidelity of evidence-based practices from training settings to real classroom settings” (p. 293). They found that coaching is a means to effectively close the bridge between theory and practice. In fact, they purport that all PD, whether pre-service or in-service, “should include a coaching component whenever possible, to intentionally train teachers to use evidence-based practices in the classroom” (Kretlow & Batholomew, 2010, p. 243).

Still, according to the NSDC (2009), the USA “is far behind [other nations] in providing public school teachers with opportunities to participate in extended learning opportunities and productive collaborative communities” (p. 3). Some researchers claim mentoring and coaching to be in accord with adult learning theories as referenced by Dunst et al. (2011) (i.e., multiple training opportunities afforded over time).

Helmer, Bartlett, Wolgemuth, and Lea (2011) also did a study of the effects of coaching in Australia. They explored the linkage of coaching as it relates to commitment, quality of teaching, and student outcomes. Participants totaled 11 teachers in seven primary schools considered to be remote to small towns across a region in Northern Australia serving students in grades Kindergarten through grade three. The study was done over a two-year period. A mixed methodology design was used to

include an on-line survey, classroom observations, and two researchers' anecdotal notes/logs. The survey instrument was validated through a pilot study and inter-rater reliability was established at $\alpha = .92$. Teachers also kept reflective journals of their impressions and participated in two focus groups.

Integral to the Helmer et al. (2011) study was that all teachers were expected to use an online literacy tool named ABRA. All were willing to do so, but many reportedly did not implement the literacy activities with fidelity even with the benefit of individual coaching. They found that the younger, less experienced teachers embraced the program while the more experienced teachers with established instructional strategies were not as committed. In fact, there was resistance in the form of not being available to meet with coaches and minimal effort to integrating suggested strategies into their instruction. In short, they found the inexperienced teachers "took the ideas offered by the researcher/coaches and ran with them" while "the more experienced teachers in this study were very set in their ways and were generally not open to change" (Helmer et al., 2011, p. 202). The impact on student outcomes was telling in that the teachers, regardless of experience, that implemented the literacy tool with fidelity showed greater gains from pre-test to post-test.

This study by Helmer et al. (2011) had merit on many levels. The methodology was sound, measures were validated, quantitative results were reported in means and standard deviations, and qualitative data were summarized well. Reasonable limitations were offered. The relative weakness in this study was the small sample size and that participants were chosen and not randomly selected. The role of researchers, being both observers and coaches, may have impacted findings as well.

Garet et al. (2001) conducted a national probability sample of over one-thousand math and science teachers in an effort to answer the question, “What makes PD effective?” They created a set of scales based upon a literature review of best practices and then tested them to determine their effectiveness on teacher outcomes. Garet, et al. (2001) created a Teacher Activity Survey with various Likert-type scales per section. Participants were randomly selected, math and science teachers who attended grant-funded Eisenhower-assisted activities over three seasons in one year.

Using pairwise correlations and tests of multiple regression, Garet et al. (2001) found sustained, intensive PD had a greater impact than shorter ones. PD that provides active learning and is integrated into the work day is highly correlated with enhanced knowledge and skills. Unlike the previously cited study by Dunst et al. (2011), Garet et al. (2001) claimed to improve PD, it is more important to focus on duration, collective participation, and the core features (i.e., content, active learning, and coherence) than type. However, if one looks deeper into the definition of active learning and considers duration, they have similar features to what Dunst et al. (2011) called enhanced field-based PD.

Garet et al. (2001) surveyed a very large, random sample across several months. Their survey instrument and data analysis met the rigor expected of scholarly research. The participants, however, may have been biased in that the researchers included only math and science teachers involved in designated grant-funded activities.

Several studies found that *focus on content or subject matter* that is relevant to the teacher is critical (Ross & Bruce, 2007; Dunst et al., 2011; Garet et al., 2001; Guskey, 2002; Helmer, Bartlett, Wolgemuth, & Lea, 2010; Hunzicker, 2010; & Wilson & Berne,

2009). Helmer et al. (2011) posit that “professional development becomes relevant when it connects to teachers’ daily responsibilities and becomes authentic when it is seamlessly integrated into each school day, engaging teachers in activities such as coaching, mentoring and study groups” (p. 178). Furthermore, directing that focus on how children learn is especially important in changing teaching practices.

A second essential feature of effective PD is *promoting active learning*. PD events that involve activities that provide teachers with opportunities to engage in meaningful discussions, plan for classroom implementation, and share what they learned (i.e., presenting to fellow teachers, leading discussions, or writing a plan) were found to be effective means of changing teaching practices (Garet et al., 2001; NSDC, 2009; Wilson & Berne, 2009). However, it should be noted that when and how long teachers participated in activities also mattered in terms of changing teacher behaviors or practices. In fact, Garet et al. (2001) found that the type of PD does not matter as much as the duration of the event. Their study indicated that teachers need “sufficient opportunities for in-depth study, interaction, and reflection” (Garet et al., 2001, p. 922). Specifically, events that were provided during the school day, sustained over long periods of time, and tied to practice were found to be most effective. Bredeson (2000) frames this concept of PD as “work at work” (p. 63). Conversely Dunst et al. (2011) found that type did indeed matter siting “enhanced field-based training was superior to all other types of in-service training in influencing participants’ judgments of the usefulness of the training and their abilities to use [sic] intervention practices” (p. 192). Whether the type of PD is mentoring, coaching, workshops, or courses, researchers agree that effective PD that positively impacts instructional practices is supportive, collaborative, job-embedded,

relevant, authentic, and on-going with multiple opportunities to see the practices in action. Simultaneously, teachers need to be engaging in reflection on their experiences and learning.

Finally, a third essential PD feature was *fostering coherence* by offering activities that build on prior knowledge, emphasizing alignment of content and pedagogy with established professional standards, and encouraging on-going communication with professional peers. Providing teachers with opportunities to participate collectively promotes a shared professional culture where teachers' capacity to grow is enhanced and sharing effective practices is the norm. Tschannen-Moran et al. (1998) coined this phenomenon as *collective efficacy* claiming that "schools where teachers work together to find ways to address the learning, motivation, and behavior problems of their students are likely to enhance teachers' feelings of efficacy" (p. 221).

In short, the one-time, *shot in the arm*, lecture-based PD event is deemed to be ineffective. Or worse, teachers are left to figure it out alone as they go through the laborious and, all too often, ineffective practice of trial and error. Thus, PD committed to changing teacher practices to improve student outcomes will contain the core features of focusing on relevant content, promoting active learning, and fostering coherence among professionals. Further, it must be sustained and intensive if it is to have a lasting impact. Wilson and Berne (2009) highlight this same point referencing Putnam and Borko's truism on PD: "Teacher educators should treat teachers as they expect teachers to treat students" (1997, p. 176).

Expanding professional knowledge and practices through targeted PD and supporting use of EBP are the tools that will empower teachers with the essential skills to

positively impact challenging behaviors. As a result, teacher efficacy is likely to be enhanced while the learning process is protected from disruption as teachers become more effective in managing challenging behaviors. Hoy (2000) noted that “once efficacy beliefs are established, they appear to be somewhat resistant to change” (p. 5). The implication, therefore, is to develop a high sense of self-efficacy in teachers early on so they will maintain that characteristic over time.

Research indicates empowering teachers with the responsibility for student outcomes correlated positively with teacher efficacy (Baker, 2005; Martin, Crossland, & Johnson, 2001). However, creating a positive work environment was the significant empowering factor rather than student achievement outcomes. Indeed, review of the research by Tschannen-Moran et al. (1998) indicated strong positive correlations between school climate, principal leadership, and shared decision making practices and enhanced teacher efficacy. This suggests administrators have input into increasing teachers’ sense of efficacy by maintaining positive workplaces such that teachers will be retained and persist in their chosen vocation. When teachers feel supported, it is more likely they will take risks including working with students that present challenging behaviors in the classroom. Baker (2005) purports “since the findings indicate a relationship between self-efficacy and readiness to manage challenging students, it is incumbent upon educators to find ways to help teachers become more confident in their own ability to meet the needs of their students” (p. 61). In fact, Hoy (2000) explains that when supports are withdrawn, efficacy falls, giving credence to the claim that sustained supports are important in protecting efficacy, especially for novice teachers.

Evidence-based Practices

A generic definition of evidence-based practices (EBP) simply means using scientifically-based research to determine best practices in any given field. In education, EBP guide teachers in deciding what teaching strategies, interventions, or approaches to implement in the effort to improve student learning outcomes. CEC (2008) defines EBP as a “strategy or intervention designed for the use of special educators and intended to support the education of individuals with exceptional learning needs” (p. 6). Marzano, Gaddy, and Dean (2000) define EBP as “instructional strategies that have the highest probability of enhancing student achievement for all students in all subject areas at all grade levels” (p. 4). Of course, specific strategies or interventions must meet the rigor of professional peer reviews and established research standards such as reliability and implementation fidelity.

Some examples of EBP in managing students with challenging behaviors in public schools are Applied Behavior Analysis (ABA) and Functional Behavior Analysis (FBA). In addition, there exists a systems approach to managing behaviors by implementing EBP within the framework of Response to Intervention (RtI) or Positive Behavioral Interventions and Supports (PBIS). Marzano et al. (2000) found through meta-analysis that strategies considered to be EBP in managing students with challenging behaviors included cooperative learning, setting goals, providing feedback, reinforcing effort, and providing recognition. Multiple researchers and authors over many years purport that such EBP that provide positive reinforcement have a tremendous impact on managing students with challenging behaviors (Horner, & Kratochwill, 2012; Lavoie, 2007; Ling, Hawkins, & Weber, 2011; Maag, 2001; Solomon, Klein, Hintz, Cressey, & Peller, 2012). Some researchers found teachers are positively motivated to use EBP, but

few actually implement them with fidelity in the classroom (Burns & Ysseldyke, 2009; Kretlow & Blatz, 2011; Williams & Coles, 2007).

In Williams and Coles (2007) study across the United Kingdom (UK), nearly 400 teachers across a stratified random sample were surveyed to examine current teacher practices, attitudes, and skills in using EBP in an effort to discover ways they could be fully integrated into the teaching profession. The emphasis of this study was on the teachers' "information literacy—i.e. teachers' strategies and confidence in their abilities to find, evaluate and use research information, which is defined as the published output of a planned piece of research" (Williams & Coles, 2007, p. 185). Seventy-eight of the teachers were Head teachers. Researchers used a mixed methodology design to include a survey (N=400), interviews (N=28), and focus groups (N=15). "All methods were piloted prior to use with the main samples" (Williams & Cole, 2007, p. 189). The responders were 3,500 randomly selected teachers from all grade levels across England, Scotland, and Wales. Results were analyzed using SPSS to determine correlational relationships between factors as measured by Chi-square, phi and Cramer V-tests.

Results indicated that although teachers held positive attitudes toward using EBP, their actual use in the classroom was limited. Teachers attributed this to three barriers: lack of time, lack of access to resources, and low confidence in knowing how to search effectively for EBP. Specifically, teachers shared that "greater access to sources via the internet could make a difference" (Williams & Cole, 2007, p. 203). Moreover, teachers expressed a need for a single-site where they can go for ideas and resources to address the issue of having low confidence in effectively searching and finding EBP to use in their classrooms. Further, dissemination to teachers and creating teacher networks where they

can share ideas and outcomes were recommended.

Williams and Coles (2007) deemed their response rate to be relatively low at 317 and even noted that it was likely due to responder bias in that those who volunteered to participate were interested in the topic of EBP. Nonetheless, their sample size, piloting of instruments used, data collection and analysis all seem to be sound. They provided specific examples of questions and verbatim responses. This study could certainly be replicated.

In 2009, Burns and Ysseldyke conducted a study on the prevalence of EBP in special education programs. This study focused on the prevalence of eight well defined EBP regarding both instructional and behavior management strategies: applied behavior analysis; direct instruction; formative evaluation; mnemonic strategies; modality training; perceptual-motor training; psycholinguistic training; social skills training. Burns and Ysseldyke (2009) examined the prevalence of these EBP as measured by rate of frequency of various practices being used in classrooms serving students in special education programs. They used two 12-item surveys with special education teachers (N=174) and school psychologists (N=333). The participants were randomly selected through their affiliation with two professional organizations – the Council for Exceptional Children (CEC) and National Association of School Psychologists (NASP). They represented 41 states across the USA and rural to urban communities. The majority of teachers were working in pull-out special education classrooms (76%) versus inclusive (13%) ones. The remaining 11% worked as consultants. Although they reported students with Specific Learning Disabilities (SLD) as the largest population served, they also taught students across multiple disability categories (e.g., ED, OHI, ASD, & MR (ID)).

The school psychologists averaged 16 years of experience. Burns and Ysseldyke (2009) included these professionals because they typically work closely with students identified with special needs and provided an observational approach. Teachers reported how frequently they used EBP using a five-point Likert-type scale, whereas the psychologists ranked eight EBP based upon how often they observed them in the classrooms. Eight EBP were listed and defined, including ABA. Results were reported using mean effect sizes and frequency of responses with percentages and “n” per ratings.

Both groups reported direct instruction was the most frequently used instructional methodology with perceptual-motor training as the least frequent. Practices with little empirical support (e.g., modality instruction) were reportedly used with some frequency. EBP related to managing behavior were reported to be used with equal frequency. Teachers reported using social skills training as often as they did ABA even though the former has much less research ($ES = .21$) to support it as an EBP versus the latter which has a strong research base ($ES = .91$). Burns and Ysseldyke (2009) summarized saying “these data present some reason for optimism, although special education does not appear to be immune to a research-to-practice gap” (p. 2).

This study had a strong sample size, but selecting participants from two professional organizations may have biased results. The majority of raters were not teachers, plus relying on the memory of external observers as to what they perceived may have weakened the integrity of the results. There was no indication that the surveys were piloted or validated. The definitions were helpful, but a lengthier and more specific list of EBP could have provided rich data. The statistical measure (Friedman nonparametric test to examine rank order EBP) was reasonable. The authors offered some thoughtful

suggestions for further research.

Applied behavior analysis. As referenced in previous studies (Burns & Ysseldyke, 2009; Kavale & Forness, 2000), ABA is considered to be a highly effective form of EBP. By definition, ABA is the practice of systematically applying the principles of analyzing behavior in an effort to improve social interactions and change inappropriate or unproductive behaviors. This begins with identifying variables that may be responsible for changing behaviors (Cooper, Heron, & Heward, 2007). The fundamental purpose of using ABA is to identify the variables that maintain problem behaviors with the intention of changing undesirable behaviors into desirable ones (Friman, 2010). B.F. Skinner pioneered the concept beginning in the early 1950's upon the premise that if a behavior is socially important, then it is worth analyzing with the intention to change it (Baer, Wolf, & Risley, 1968). More recently, ABA has been considered an EBP in effectively managing challenging behaviors for students identified with an Autism Spectrum Disorder (ASD) as well as with individuals with psychotic mental disturbances (Friman, 2010).

According to What Works Clearinghouse [WWC] (2010), the *Lovaas Model* is a type of behavioral therapy used largely with children with Autism that uses ABA practices such as discrete trials. This ABA instructional technique involves brief periods of one-on-one instruction where a teacher cues a behavior, prompts the appropriate response, and provides reinforcement to the child. "Children in the program receive an average of 35 to 40 hours of intervention per week, which consists of in-home one-to-one instruction, facilitated peer play, inclusion and support in regular education classrooms, and generalization activities for transfer of skills to natural environments" (WWC

Program Overview, p. 1). Parents are also trained in the instructional techniques and interventions generally last about three years.

According to What Works Clearinghouse (WWC) research, 58 studies were reviewed to investigate the effects of the *Lovaas Model* on children with disabilities. Only one study (Sallows & Graupner, 2005) met WWC evidence standards. Another study by Smith, Groen, and Wynn, (2000), also a randomized controlled trial study, raised issues around severe attrition. That study met WWC evidence standards, however, with reservations. A remaining 56 studies did not meet either WWC evidence standards (WWC, 2010).

The primary focus of Sallows and Graupner's (2005) study was on the impact of early intervention behavioral treatment for children with Autism. A total of 24 pre-school aged children were "recruited from local early intervention programs serving students ages birth to three years old. The children were randomly selected and then assigned into either a clinic-directed group or a parent-directed group. The clinic-directed group (N=13) received intensive behavior interventions using the *Lovaas Model*. The parent-directed group (N=10) received in-home supports. The authors did note that the "N" is less one due to fewer number of treatment hours received.

Sallows and Graupner's (2005) used a pre/post-test methodology with valid instruments (e.g., Bayley, Wechsler, & Vineland). Staff implementing interventions were sufficiently trained and/or supervised by licensed therapists. Appropriate statistical methods (ANOVA, linear regression, correlations, etc.) were used to analyze data. The researchers reported significant findings in the children receiving the early intervention treatment improved as measured by full scale IQ, language acquisition, and adaptive skill

development scores. Sallows and Graupner (2005) also claimed early intervention to be predictors of growth in three areas: imitation, language, and social responsiveness.

For the most part, appropriate methodology and type of test instruments were used. However, results of this study are questionable due to a number of concerns. First, they had a small sample size. Second, they used different tests to measure IQ at pre (Bayley) and post (Wechsler) measures. These tests are not normed on the same population and therefore cannot be compared with confidence. They even share that “another possible confound was that most pre- and post-testing of moderate learners was done by the second author, perhaps introducing bias” (Sallows & Graupner, 2005, p. 434). Third, the researchers’ rationale or interpretation of their findings did not take into account that the external threat of maturation could certainly explain for the reported growth. This is particularly true when working with very young children. They claimed rapid learners made greater gains than their slow learner peers. This would seem to be a logical and forgone conclusion in that children with average cognitive abilities typically grow at a more rapid rate than their peers with sub-average abilities. Finally, they reported the unexpected finding that the parent-directed group performed just as well in many areas, but did not provide an adequate rationale for this finding. WWC was generous in saying this study met their research requirements. There are simply too many items that give rise to reservations on the validity of this study.

The other study cited by WWC (2010) that used *Lovaas Model* with ABA techniques was by Smith, Groen, and Wynn (2000). They also used a randomized trial method to select a group of 15 pre-school aged children with Autism and Pervasive Development Delay-Not Otherwise Specified (PDD-NOS). The intensive intervention or

treatment group included seven children identified as being Autistic and the other eight were identified as PDD-NOS. This treatment group received 24.5 hours per week of 1:1 intervention for 2-3 years. The parent training group consisted of seven children with autism and six with PDD-NOS. This group received five hours per week of parent training for three to nine months. Follow-up was conducted when the children reached age seven.

Smith, Groen, and Wynn (2000) reported that their intensive group performed better on IQ, visual-spatial skills, language, academics, and had less restrictive school placements. However, the two groups did not differ in adaptive behavior or behavior problems. They also reported IQ gains were less than their previous study (16 vs. 31 points) and that only 2 of 15 intensive subjects achieved “best outcome”. Finally, the children in the treatment group identified as PDD-NOS gained more than those with Autism.

As WWC (2010) expressed concern in what they labeled as attrition, there is the threat to validity in terms of children’s maturation over several years. Furthermore, *Lovaas Model* has been criticized on several points: lack of true random assignment of subjects to groups, children were not truly autistic, children continued to present autistic behaviors despite placement, and use of aversive techniques to name a few (WWC, 2010).

Functional behavior assessments. Over time, the focus moved from merely observing behaviors followed by reinforcement or punishment, to understanding the function of behaviors resulting in planned interventions to positively change behaviors (Hanley, Iwata, & McCord, 2003). In public schools, this is typically done through the

process of conducting Functional Behavior Assessments (FBA). Indeed, Friman (2010) contends that FBA are “arguably one of the major reasons for the expanding influence of applied behavior analysis” largely due to the legal mandates of IDEA requiring them as an integral part of special education programs (p. 167).

However, according to the extensive research review by Hanley et al. (2003), “one general criticism found in several commentaries on functional analysis methodology that appeared in the 1994 special issue of *JABA* was that functional analyses do not adequately sample all relevant aspects of the controlling environment” (p. 175).

Examples given were lack of consideration for students who may have been ill or under the influence of drugs. Such factors could greatly impact how a student presents an antecedent or response behavior. Furthermore, if these variables were not taken into account when analyzing data, then the resulting behavior intervention plan would be flawed and ultimately be less effective.

Another extensive review of use of FBA in public schools was conducted by a team of researchers in 2004, particularly for general education teachers who deal with large groups (Scott, Bucalos, Liaupsin, Nelson, Jolliivette, & DeShae, 2004). They made a call for more effective and efficient use of FBAs in addressing students with challenging behaviors. Their claim was “there continues to be an insufficient empirical database on FBA for students in nonclinical settings who exhibit a range of problem behaviors to establish a basis for making methodologically sound recommendations about best practice in conducting FBA. This is particularly true in reference to the absence of published studies in general education settings and involving adolescents, both middle and high school students (Scott et al., 2004). In essence, educators will need extensive

training on how to collect and analyze data, monitor progress, and develop appropriate intervention plans in an effort to effectively address challenging behaviors in schools. This will demand time and resources in the form of targeted PD by trained staff and on-going supports.

A FBA is a tool used to collect and analyze data to determine if there is a pattern such that an individualized Behavior Intervention Plan or BIP should be developed. It typically includes a combination of informal and formal observations with focused interviews from various sources (student, parents, caregivers, teachers, administrators). Conducting a FBA becomes necessary when students' behavior problems cannot be successfully addressed through routine school-wide or classroom-level procedures. For students with disabilities, a FBA is required according to federal law and state regulations if the student has been suspended from school for more than ten days establishing a change of placement *and* the student's misconduct is determined to be a manifestation of the disability. Dunlap and Hieneman (1999) maintain that "functional behavior analysis has been shown to be a powerful approach for developing positive and effective interventions" (p. 13). This often comes in the form of an individualized plan also known as a BIP.

Effective BIP are developed based upon empirical data collected through the FBA process and have the essential features of procedures for preventing undesirable behaviors, explicit instructional objectives related to teaching desired behaviors, and use of reasonable, related consequences emphasizing reinforcement of appropriate behaviors versus punishment of misbehaviors (Sugai & Horner, 1999). Sugai and Horner (1999) claim that "effective behavioral support plans will focus on socially important behavior

change that endures over time and results in generalized effects” (p. 18). The intention is to make lasting behavior change that will likely be more durable and positively impact learning opportunities for both the individual and the group as a whole. Teachers that are adept at using this EBP will be equipped with a powerful tool to improve learning outcomes for all students, particularly those with significant challenging behaviors. This practice of data collection, analysis, and development of targeted behavior intervention plans using a team approach is integral to the Response to Intervention model (RtI).

Response to intervention. Response to Intervention or RtI is a framework for assessing and teaching struggling learners. Consideration of this model of intervention began in the year 2000 with the Office of Special Education Programs’ (OSEP) inquiry regarding current assessment and identification procedures of students with SLD. In 2006, the National Association of State Directors of Special Education (NASDSE) in conjunction with the Council of Administrators of Special Education (CASE) claimed this to be an exceptional opportunity to create a well-integrated system of instruction guided by student outcome data. When President George W. Bush signed NCLB into law in 2001, the path was paved for more inclusive programs for students with disabilities into general education curriculums and classrooms. Then, with the reauthorization of IDEA in 2004, the focus moved from *where* and *when* instruction takes place to *how* children progress in general education environments (Hallahan, 2006). Therefore, an accurate means of evaluating student progress was needed. RtI was a vehicle to not only meet the letter of the law, but the intent as well. That is, to meet the educational needs of *all* learners while providing highly qualified instruction and interventions matched to student academic and behavioral needs.

A major principle at the core of RtI is the multi-tiered service delivery model addressing both academic and behavioral concerns (Fuchs & Fuchs, 2001; NASDSE & CASE, 2006). This involves multidisciplinary teams using a problem-solving approach to develop effective instructional intervention plans. Decision making is data-driven. The intended results are to provide high quality instructional interventions geared to varied learning rates and student levels of performance. Educational decisions are based upon the individual and his or her responsiveness to interventions. On the first tier, proactive and preventative interventions are introduced affecting approximately 80 to 85% of the student population. The second tier provides more intensive and direct interventions to a targeted 15% of the population. Students who are deemed to be “unresponsive” to this level of intervention are then considered for tier three. Here, about five percent of pupils are given very intensive, individualized interventions. If a student is still “unresponsive”, it is then that a referral for special education consideration is recommended. According to a recent national survey, implementation of such multi-tiered intervention models addressing both academics and behavior in schools are on the rise (American Association of School Administrators [AASA], 2009).

The RtI multi-tiered model of intervention is a “continuum of increasingly intensive, specialized instruction” (National Research Center of Learning Disabilities [NRCLD], 2003). RtI has similar features of PBIS in that they both include a prevention-focused continuum of support, proactive instructional approaches to teaching and improving social behaviors, data-based decision making, use EBP, and systems change to support effective practices with the focus on improving student outcomes as well as teacher practices (Sugai, 2004). Benner, Nelson, Sanders, and Ralston (2012) state that

“school-wide positive behavior intervention support (SWPBIS) programs also use a continuum of behavior interventions that are consistent with the core principles of RtI” (p. 182).

Positive behavior intervention support. Positive Behavior Intervention Support (PBIS) programs are firmly grounded in the theoretical framework of behaviorism and B.F. Skinner’s reinforcement theory. Skinner argued that the internal needs and drives of individuals can be ignored because people learn to exhibit certain behaviors based on what happens to them as a result of their behavior (Barnett, 2006). PBIS is rooted in behavioral theory in that it addresses stimuli or antecedents to behavior, function of behaviors, use of reinforcements or rewards to elicit desired behaviors, use of logical or natural consequences to reduce undesirable behaviors, and restructuring the environment to prevent unwanted behaviors (Barnett, 2006; Yeung, Mooney, Barker, & Dobia, 2009). Many of the concepts of PBIS incorporate ABA principles and FBA practices embedded in the reinforcement theory. For instance, collecting data across settings to determine antecedents, function, and patterns of behavior through the use of FBA is integral to both ABA and PBIS. Furthermore, analyzing data to develop BIPs is also in keeping with ABA principles and are typically subsequent to conducting FBAs (Sugai & Horner, 2002). According to Sulzer-Azaroff and Mayer (1994), behavioral methodologies have utilized such empirical data collection approaches as vital to facilitating positive behavior changes. PBIS adopts a behaviorist approach to identify and manage disruptive behaviors in an effort to equip educators with the necessary EBP to teach appropriate behaviors such that learning is strengthened and school environments are enhanced.

The PBIS movement grew out of frustration with use of traditional methods for addressing serious behavior problems which were often narrowly defined, punitive, and intrusive in nature, incongruent with inclusive practices, and ineffective in helping people realize meaningful changes in behavior (Carr, Dunlap, Horner, Koegel, Turnbull, & Sailor, 1997; Carr & Horner, 1997; Crisis Prevention Institute [CPI], 2005, 2008, 2009, & 2010; Sugai & Horner, 2002). There was mounting evidence that imposing negative consequences for unacceptable behaviors actually increased antisocial acts such as school vandalism, truancy, and dropout rates while accomplishing little to exact lasting change to student behaviors (VDOE Teacher Technical Assistance Center [TTAC], 2009). According to the OSEP (2004), implementation of PBIS reduced school related problems as measured by the number of classroom incidents, office discipline referrals, and student suspensions by up to 80% in two-thirds of the cases reported along with a 50% reduction of referrals for special education services. Researchers claimed PBIS not only holds real promise for safely addressing significant behavioral problems proactively for students in public school settings, but has the added benefit of enhancing the individual's overall quality of life (Horner, 1999; Horner & Carr, 1997; Keogel, Keogel, & Dunlap, 1996; Meyer & Evans, 1993). PBIS-based programs gained much favor across the nation in addressing behavioral problems, not only for at-risk youth with mental health issues, but for all students in public school settings where behavior issues often impact learning.

PBIS pioneer George Sugai and others describe the essential features of PBIS to include a prevention-focused continuum of support; proactive instructional approaches to teaching and improving social behaviors; conceptually sound and empirically validated practices; systems change to support effective practices; and data-based decision making

(Shores, Jack, Gunter, Ellis, DeBriere, & Wehby, 1993; Sugai, 2004; Sugai, Horner, Dunlap, Hieneman, Lewis, Nelson, et al., 2000; Sugai & Horner, 1999, 2002, & 2009; Sulzer-Azaroff, & Mayer, 1994; Tolan, & Guerra, 1994). In short, PBIS is a dynamic and systematic problem-solving approach of implementing EBP in a concerted effort to develop and enhance social skills of students with the associated advantages of improved achievement outcomes and more positive learning environments.

According to Sugai, Horner, Dunlap, Lewis, Nelson, Scott, et al. (1999), “the goal of PBIS is to apply a behaviorally-based systems approach to enhancing the capacity of schools, families, and communities to design effective environments that improve the fit or link between research-validated practices and the environments in which teaching and learning occur” (p. 7). In summary, the scientific basis of PBIS is illustrated by a systems change approach using implementation of universal to targeted intensive interventions with the focus on positive approaches versus punitive, reactive ones in a team-based effort to reduce disruptive behaviors while simultaneously improving academic outcomes (Atkins, 2003).

Implementation of PBIS is one means of coping with significant behavior problems. The alternative, an excessive reliance on aversive behavior management techniques as a means to manage or minimize disruptive or dangerous behaviors, makes it unlikely that the individual will develop the essential life coping skills needed to succeed in challenging situations outside of the school settings (Amos, 2004; Donat, 2003; Greene, Ablon, & Martin, 2006). Educational leadership will need to be committed to effectively influence efforts to provide the necessary supports and training to enable teachers to diffuse conflicts using effective verbal de-escalation techniques and

thereby empower students to develop effective coping skills – especially children with cognitive and/or problem solving limitations.

Recognized evidence-based programs. EBP such as ABA, FBA applied within multi-tiered frameworks such as RtI or the systems approach of PBIS are viable tools to address challenging behaviors in public schools. However, it is just as important to have knowledge on inappropriate responses to managing students with challenging behaviors such that all are kept safe from harm. According to the Government Accountability Office (2009), challenging behaviors and teachers' inappropriate responses rose to such a level that a national inquiry was launched to investigate several claims of undue harm to children in public school settings. As a result, programs that typically supported law enforcement agencies and mental health facilities expanded their clientele to public school personnel across the nation. Given the increase of both the number and intensity of students with significant behaviors, programs to manage severe challenging behaviors such as *The Mandt System®*, *Crisis Prevention Institute's Nonviolent Crisis Prevention®*, and *Handle with Care* have emerged within public schools. All three are highly accredited as recognized by meeting or exceeding requirements of notable organizations - e.g., Joint Commission on Accreditation of Healthcare Organizations [JCAHO], Commission on Accreditation of Rehabilitation Facilities [CARF], and Council on Accreditation [COA] (United States Government Accountability Office [GAO], 2009).

These programs emphasize a collaborative team approach focusing on preventing disruptive behaviors through verbal de-escalation practices coupled with increased self-awareness while maintaining the students' respect and well-being. The approach builds

skills of using alternatives for de-escalating individuals using a combination of communication skills, conflict resolution strategies, and physical interaction techniques. All advocate using physical restraint only in emergency situations to reduce harm to all involved. Most importantly, all promote a prevention approach to managing students with challenging behaviors versus use of exclusionary and punitive practices. Given that the federal mandates require use of EBP and strongly encourage use of non-punitive practices, educators will benefit from PD opportunities on such topics.

Many of the practices of these programs align with the essential features of PBIS in the effort to improve educators' skills in effectively and safely managing students with challenging behaviors in public schools. Further, these accredited models meet the regulatory requirements of IDEA Part B – Section 611 (e) (2) (C) authorized activity “to assist local educational agencies in providing positive behavioral interventions and supports and appropriate mental services for children with disabilities” (CPI, 2009, p. 2). These proven models of effective use of seclusion and restraint not only meet the demands of the legal mandates, but provide effective practices toward reducing challenging behaviors in public schools.

Understanding the relationship of legal mandates, effectiveness of the above mentioned EBP, and recognized programs addressing significant behaviors in schools is important in establishing a professional knowledge base on what teachers need to effectively manage students with challenging behaviors. In doing so, educational leaders and policy makers will be positioned to develop programs and provide the necessary supports to teachers in an effort to empower them to positively impact student outcomes. This will entail offering relevant PD opportunities to expand teachers' professional

knowledge of EBP to effectively manage students' challenging behaviors while enhancing teachers' sense of efficacy.

Summary

Teachers are dealing with increased frequency and intensity of challenging behaviors along with heightened accountability per legal mandates (CEC, 2010; NCATE, 2008). This changes the landscape of practices for public school teachers. They must be well versed in data collection, analysis, a myriad of evidence-based instructional and behavioral practices and strategies. Teachers are expected to be knowledgeable of how to respond to academic and behavioral challenges in the form of collecting and analyzing data, implementing appropriate instructional strategies, and developing targeted behavioral intervention plans. All of these factors will certainly have an impact on how teachers practice their trade in public schools. Further, there will be need to be different approaches to support teachers that provide content-oriented PD opportunities that promote active learning provided over a long period of time such that they can effectively manage all of these tasks and challenges (Dufour, DuFour, Eaker, & Many, 2006; Holcomb, 2001; McLaughlin & Nolet, 2004). This current study provides data on what EBP teachers use in an effort to manage students with challenging behaviors as it relates to educators' sense of TSE, the impact of types and topics of PD received, years of experience, and teacher type.

CHAPTER III: Methodology

This study examined the relationship between teachers' self – reported beliefs regarding managing challenging behaviors in their classrooms and the classroom practices they reported along with their professional development knowledge of how to manage students with challenging behaviors. Specifically, the study examined how TSE correlated with teachers' use of EBP to effectively manage students with challenging classroom behaviors. In addition, the study explored the correlation between teachers' use of EBP and how teachers value types and topics of PD as well as teacher experience in managing students with challenging behaviors. Finally, the study describes the difference between general and special education TSE as well as their use of EBP to manage students with challenging behaviors. The study sought to provide pre-service and inservice professional developers with information on how to offer more targeted and sufficient supports, in both pre-service and in-service programs, in an effort to enhance teachers' knowledge of EBP to effectively manage challenging classroom behaviors.

Research Design

A correlational design was used to achieve the purpose of this study. I chose this design to determine and measure the significance of the relationship between teachers' use of EBP in managing students with challenging behaviors with regard to each of the following three variables: a) teacher self-efficacy (TSE); b) impact of types along with topics of PD received to manage students with challenging behaviors; and c) teacher experience. In addition, comparison of the differences between general and special education teachers' with regard to TSE and use of EBP to manage students with challenging behaviors was investigated.

Research Questions

This study used teachers' self-reported beliefs, practices, and experiences regarding their perception and actions in managing students with challenging behaviors in their teaching. I surveyed teachers working in public schools in a region of a mid-Atlantic state as the data source. Teacher beliefs were indicated by their sense of efficacy to manage challenging behaviors as measured by an adapted version of Tschannen-Moran and Hoy's (2001) short form instrument entitled *Teachers' Sense of Efficacy Scale* or *TSES*. Teacher practices were determined by the extent that evidence-based strategies were reportedly used in the classroom based upon teacher report. Teachers also reported exposure to various types and topics of PD that impacted their practices to effectively manage students with challenging behaviors. Teacher experience was ascertained by the reported number of years of service. Information on differences between general and special education teachers are described with regard to their sense of self-efficacy and use of EBP in managing students with challenging behaviors. Data gathered were used to address the following research questions:

1. What is the relationship between teachers' self-efficacy and their use of evidence-based practices in managing students with challenging behaviors?
2. What is the relationship between teachers' use of evidence-based practices and how they value types and topics of professional development?
3. What is the relationship between teachers' use of evidence-based practices and teacher experience in managing students with challenging behaviors?
4. What is the difference between general and special education teachers and their sense of self-efficacy?

5. What is the difference between general and special education teachers and their use of evidence-based practices?

Participants

Sampling. The population of interest was school teachers employed in public schools within a region of a mid-Atlantic state. The region served over 80,000 students and included 17 school districts in 14 counties, one city, and two towns. Of those districts, 11 were considered to be rural and six were identified as suburban/metropolitan areas. Initially, potential participants included approximately 6,000 elementary and secondary teachers employed across the region. This convenience sampling included licensed public education teachers currently working in public schools serving elementary and secondary school levels (PK-12). The study excluded school administrators, school psychologists, therapists, counselors, behavioral consultants, or others not involved in directly teaching students on a day-to-day basis. Three-hundred and forty-two teachers (342) responded from twelve (12) school districts. Ten (10) districts were rural and two (2) were suburban/metropolitan. A description of the respondents' demographics is provided in Chapter IV (See Table 2). This convenience sampling was considered sufficient in size for the scope of this research study in that the region is reflective of size and demographics of other districts across the mid-Atlantic state.

Data Collection.

Upon approval of the Human Subjects Committee at the College of William and Mary, volunteer participants were recruited from districts within a region of a mid-Atlantic state. Each district superintendent was contacted in writing (see Appendix A)

followed by a phone and/or face-to-face conference requesting permission to access teachers via their work email to complete the on-line survey. Two follow-up emails were sent to each superintendent or district contact requesting the survey be made available to all teachers serving students in grades PK-12. Participants were requested to provide information based upon their expertise. They were notified that their responses would make a contribution to the field of education. Specifically, their responses would be very useful in providing meaningful information to educational leaders with regard to supporting teachers in the field of education to effectively manage students with challenging behaviors in schools.

Data were collected via on-line survey using Qualtrics software. Participants were contacted by email from the district's central office asking them to complete the survey during a specific time window of several weeks (March 20, 2012 through April 21, 2012). Once a survey was completed, participants were not able to access the survey in order to prevent duplicate responders. Two follow-up email notices were sent to all potential participants via the district contacts to maximize responder rates. No personally identifying information was requested of participants. All findings were presented as a general report such that individual responses remain anonymous. Findings will be made available to participating district superintendents and to participants upon request.

Instrumentation

Data were collected via an on-line survey entitled *Relationship Between Teacher Self-Efficacy Beliefs and Use of Evidence-based Practices in Managing Students with Challenging Behaviors*. The survey instrument was a combination of a modified questionnaire and a rating scale as described below. Original questionnaires were

provided with permission by Dr. David L. Westling from Western Carolina University in Cullowhee, North Carolina as well as by Dr. Megan Tschannen-Moran from the College of William and Mary, Williamsburg, Virginia. Requests to use surveys were made via email and phone calls. Participants reported their perceptions through a 9-point unidirectional rating scale along with demographic information in an effort to answer the research questions.

Questionnaire about teachers and challenging behavior. Westling's (2010) questionnaire entitled *Questionnaire About Teachers and Challenging Behavior* was modified to reflect the focus of this study. Westling (2010) reported his survey instrument was put before a panel of 15 recognized national experts including researchers, authors, and editorial board members of relevant journals in the fields of ABA and PBIS to develop content validity of the questionnaire. Test-Retest and Cronbach's Alpha per questionnaire section or item was used to establish reliability measures. Westling (2010) reported "reliability levels were acceptably high with the exception of test-retest correlations" for four items scoring below .70 (pp. 52 -53).

Teachers' sense of efficacy scale (TSES). The full short form version of Tschannen-Moran and Hoy's (2001) instrument entitled *Teachers' Sense of Efficacy Scale* was used as part of the adapted survey instrument. The survey used the exact same directions and 9-point unidirectional scale as Tschannen-Moran and Hoy's TSES (2001). The only change to that portion of the survey was embedding the phrase *with challenging behaviors* after the word "student" into each question in Section I. Fives and Buehl (2010) conducted a factor analysis of Tschannen-Moran and Hoy's TSES instrument and found that both the long and short forms produced similar means and reliability

information, suggesting that either form is appropriate for use with pre-service or practicing teachers.

Although both original instruments had established content validity and reliability, since the instruments were modified for this study, an expert panel of university professors, researchers, and educational administrators were asked to review the content of the adapted survey. Recommendations from the expert panel were taken into consideration in the modification of the survey instrument. For example, changes were made in word reduction, directions, nomenclature, and response options to reflect each type of challenging behavior.

The final survey (Appendix B) was refined again per input from the dissertation committee members. Changes were made to accurately match research questions to the survey sections, delete extraneous items or sections, and decrease the length of the survey instrument to improve response rates. The modified survey was then administered to a panel of public school teachers to obtain feedback with regard to utility of the instrument. The purpose of this panel was to assure that the survey instrument was feasibly able to be completed within a reasonable period of time within 10 minutes to maximize responder rates in an effort to have an adequate sample size such that results could be generalized. All practice participants were able to complete the survey in less than 10 minutes.

Data Analysis

First, the researcher used SPSS version 20 to conduct a correlational statistical analysis to measure the relationship between teachers' responses on their sense of efficacy as it related to use of EBP in managing students with challenging behaviors. Second, a correlational analysis measured the relationship between teachers' use of EBP

and how they value types and topics of PD. A third correlation measured the relationship between teachers' use of EBP in managing students with challenging behaviors and their years of teaching experience. Results were expressed as correlation coefficients (r).

Descriptive analysis as measured by t -tests indicated the differences between general and special educators' sense of self-efficacy along with differences in their use of EBP. As shown in Table 1, the first three research questions were analyzed using bi-variate correlations and the final two were analyzed using descriptive t -tests.

Table 1.

Data Collection and Analysis for Research Questions

<u>Research Question</u>	<u>Data Collection</u>	<u>Data Analysis</u>
1. What is the relationship between TSE and their use of EBP in managing students with challenging behaviors?	On-line Survey/Questionnaire [Section I, # 1-12: Section II, # 1-18].	Bi-variate correlation coefficient (r)
2. What is the relationship teachers' use of EBP and how they value types/topics of PD?	On-line Survey/Questionnaire [Section II, #1-18: Sections III & IV].	Bi-variate correlation coefficient (r)
3. What is the relationship between teachers' use of EBP and teacher experience in managing students with challenging behaviors?	On-line Survey/Questionnaire [Section II, #1-18: Section Demographics A & B].	Bi-variate correlation coefficient (r) & Multiple regression
4. What is the difference between general and special education teachers' TSE?	On-line Survey/Questionnaire [Section I: # 1-12: Section Demographics A & B].	Descriptive t -tests
5. What is the difference between general and special education teachers and their use of EBP?	On-line Survey/Questionnaire [Section II: # 1-18: Section Demographics A & B].	Descriptive t -tests

Ethical Safeguards

Consistent with federal, state, and university policy, the research required Protection of Human Subjects Committee approval. In an effort to ensure the safety of participants in this research study as required by the U.S. Department of Health and Human Services which mandates that research involving human subjects must be approved by an Institutional Review Board (IRB), all participants remained anonymous and were recruited on a voluntary basis. The researcher guaranteed that all responses would not be personally identifiable. Participants were notified that they may withdraw consent at any time.

The survey instrument was reviewed and approved by The College of William & Mary Human Subjects Review Committee as well as the researcher's doctoral committee before it was disseminated. As such, assurance was made to all participants that responses would remain anonymous and no individual responder would be identified. Participation was voluntary. Participants were notified that their consent would be obtained before being able to complete the survey. All participants were given the option to withdraw consent at any time without consequence. Upon completion of the survey, participants were provided an electronic link to access a *FREE Resource Toolkit* (Appendix C) with direct links to helpful strategies on how to effectively manage students with challenging classroom behaviors.

Participants' were informed of the purpose of the study and that their responses would be very useful in providing meaningful information to educational leaders with regard to supporting teachers in the field of education, via pre-service and in-service instruction, in effectively managing students with challenging behaviors in public

schools. Participants were offered contact information if they had any questions about the study or if they wish to report any concerns or dissatisfaction with the study. For questions, participants were guided to please contact the researcher, Sheila R. Carr at (804) 543-1340 or srcarr@emailwm.edu. The researcher's Dissertation Committee Chair, Dr. Sharon deFur could be contacted as well at (757) 221-2150 or shdefu@wm.edu. To report any concerns or dissatisfaction with the study, participants were asked to please contact the Chair of the Human Subjects Committee, Dr. Thomas Ward at (757) 221 – 2358 or tom.ward@wm.edu

CHAPTER IV: Results

This study examined the relationship between teachers' self-reported beliefs and their classroom practices along with their professional knowledge of how to manage students with challenging behaviors. Specifically, the study examined how teachers' sense of self-efficacy (TSE) correlated with their use of evidence-based practices (EBP) in managing students with challenging classroom behaviors. In addition, the study explored the correlation between teachers' use of EBP and how teachers value types and topics of PD. The relationship of teachers' use of EBP and years of teaching experience was also investigated. Finally, the study described the difference between general and special education TSE as well as their use of EBP in managing students with challenging behaviors.

This chapter provides information on the rate and demographics of survey responders. These data have been summarized with findings reported. Data were consolidated and displayed in figures with significant findings in bold for ease of reading. Data analysis provided information on the correlations between TSE and use of EBP, teachers' use of EBP and how teachers value types and topics of PD, and teachers' use of EBP and teacher experience. Factor analyses of TSE as well as EBP were calculated as well. Comparisons between general and special education teachers' sense of TSE and use of EBP for managing challenging behaviors were presented.

Response Rate and Demographics

Of the 17 divisions requested to participate, 12 confirmed that the anonymous, online survey was launched to all PK- 12 teachers from March 20 through April 21, 2012. A total of 342 participants responded with 338 of those answering all survey

items. The response rate of 18 percent was calculated using the mid-Atlantic state's department of education annual instructional personnel database on the total number of teachers employed in all districts of this region. According to this database, the total possible responders were 1,887 teachers. Of those responding, the majority of the responders were general educators (N=263, 78%). Twenty-two percent of the sample were special educators (N=76); three respondents did not indicate teacher type. Half of the teachers worked at the elementary level, PK – 5th grade (N=170), whereas the rest were split fairly evenly across middle school grades sixth through eighth (N=82, 24%), and high school grades ninth through twelfth (N=89, 26%). Most teachers had professional or collegiate licenses (N=381, 93%) leaving the remaining minority with either a provisional (N=16, 5%) or other (N=8, 2%) type of license. More than half of the teachers had a master's degree (N=181, 53%) followed closely by those with a bachelor's degree (N=148, 43%). The rest had earned either a specialist (N=8, 2%) or doctoral (N=4, 1%) degree. A majority of responders had over 10 years of teaching experience (N=186, 54%) followed by those with four to six years (N=64, 19%), then one to three years (N=48, 14%), and finally seven to nine years (N=44, 13%) of experience. An overwhelming majority (N=316, 92%) said that they planned to stay in the teaching field for at least the next three years whereas only 26 or 8% indicated they would not do so as shown in Table 2.

TSE and EBP

To answer the first research question: What is the relationship between teachers' self-efficacy and their use of evidence-based practices in managing students with challenging behaviors?, I ran a two-tailed Pearson correlation test to determine the level

of significance at the 0.01 level of probability. Findings indicated a strong correlation r of .61 between TSE and use of EBP as shown in Table 3.

Table 2.

Participant Response Rate and Demographics

Type of License	Number of Responders	Percentage of Responders
Professional/Collegiate	381	93
Provisional	16	5
Other	8	2
Total	342	100

Type of Degree		
Doctoral	4	1
Specialist	8	2
Master's	181	53
Bachelor's	148	43
Missing Responder	1	--
Total	342	100

Years of Experience		
1 – 3 years	48	14
4 – 6 years	64	19
7 – 9 years	44	13
>10 years	186	54
Total	342	100

Type of Teacher		
Special Education	76	22
General Education	263	78
Missing Responders	3	--
Total	342	100

Teacher Position		
Elementary (Grades PK-5 th)	170	50
Middle (Grades 6 th - 8 th)	82	24
High (Grades 9 th - 12 th)	89	26
Missing Responders	1	-
Total	342	100

Plan to Remain in Field		
Yes	316	92
No	26	8
Total	342	100

Table 3.

Correlation Between TSE and Use of EBP

Measure	1	2	n	M	SD
1. TSE	--	.61**	342	6.25	1.16
2. EBP		--	341	6.72	1.12

Note: The variation in *sample size* is due to one participant not responding to Section II of survey on EBP. *n* = Number of responders. M = Mean. SD = Standard Deviation. Correlation is significant at the 0.01 level (** $p < .01$, two-tailed).

Factor Analysis of TSE and EBP

The factor analysis for both TSE and EBP was based upon excluding user-defined missing values and correlation coefficients for each pair of variables on all cases with valid data with a minimum eigenvalue of one. The initial extraction created two factors. The first factor, TSE for managing students with challenging behaviors, loaded with an eigenvalue of 6.7 explained 56 percent of the variance with factor coefficients that ranged from .63 to .80. A second factor was created with an eigenvalue of 1.1 explaining nine percent of the variance. The first factor was labeled Total TSE and the second one TSE Instructional Strategies (IS).

To determine the strength of the relationship of these factors, the factors were rotated using the varimax rotation method. The varimax rotation method provides a more accurate picture of how factors load together either as high or low and indicate the strength of the relationship between a particular variable and a particular factor. Factor analysis indicated the second factor, TSE IS, was strongly correlated at .79 with the first one, Total TSE. Per the Kaiser-Mayer-Olkin definition, two of the TSE IS items had rotated factor loadings at a “meritorious” level of .80 or above (i.e., #9 = .79: To what extent can you use a variety of assessment strategies for students with challenging

behaviors?, and #10 = .85: To what extent can you provide an alternative explanation or example when students with challenging behaviors are confused?). Therefore, another test was conducted to ascertain the reliability of the factor correlation. When the two factors were forced by the test of eigenvalue > 1 and scree plot evaluation, reliability analysis produced one TSE factor with a Chronbach's Alpha (α) of .93 as shown in Table 4.

Table 4.

Factor Loadings: Factor Analysis of TSE Survey Items

TSE Survey Item	Initial factor loadings		Rotated factor loadings	
	Total TSE	TSE IS	Total TSE	TSE IS
1. How much can you do to control disruptive behavior of students with challenging behaviors in the classroom?	.73	-.29	.76	.22
2. How much can you do to motivate students with challenging behaviors who show low interest in school work?	.77	-.29	.78	.24
3. How much can you do to calm a student with challenging behaviors who is noisy or disruptive?	.78	-.24	.76	.29
4. How much can you do to help your students with challenging behaviors value learning?	.78	-.28	.78	.26
5. To what extent can you craft good questions for students with challenging behaviors?	.76	.29	.42	.69
6. How much can you do to get students with challenging behaviors to follow school rules?	.80	-.25	.78	.29
7. How much can you do to get students with challenging behaviors to believe they				

can do well in school work?	.78	-.09	.67	.41
8. How well can you establish a classroom management system with each group of students with challenging behaviors?	.79	.08	.58	.55
9. To what extent can you use a variety of assessment strategies for students with challenging behaviors?	.71	.45	.28	.79
10. To what extent can you provide an alternative explanation or example when students with challenging behaviors are confused?	.63	.59	.14	.85
11. How much can you assist families in helping their child(ren) with challenging behaviors do well in school?	.67	-.09	.59	.34
12. How well can you implement alternative teaching strategies for students with challenging behaviors in your classroom?	.75	.26	.43	.66

Note: Significant factor loadings $\geq .40$ are in boldface. TSE = Teacher Self-efficacy. Factors were rotated using the varimax rotation method.

Unlike Tshcannen-Moran and Hoy's (2001) analyses that factored strongly into three areas: classroom management, student engagement, and instructional strategies, adding the phrase *with challenging behaviors* after "student" into each question resulted in only one statistically strong factor, Total TSE, with regard to managing students with challenging behaviors. Factor analysis of teachers' reported use of EBP, on the other hand, produced three factors.

Factor analysis of EBP for managing students with challenging behaviors indicated 10 of the 18 survey items loaded together as a factor with an eigenvalue of 7.9 explaining 44 percent of the variance with factor coefficients that ranged from .50 to .76. This factor was labeled Positive Reinforcement (PR) because that common feature ran

through all ten survey items. The other two factors were comprised of four survey items each. The second factor, labeled FBA/BIP, was created with an eigenvalue of 1.4 explaining eight percent of the variance with factor coefficients ranging from .76 to .77. A third factor, ABA, had an eigenvalue of 1.2 and explained six percent of the variance with factor coefficients ranging from .62 to .78.

There were strong correlations between each EBP factor given a two-tailed correlation test with probability of significance $p > .01$. PR was more strongly correlated with FBA/BIP with an r value of .69 level than with ABA with an r value of .58 followed by FBA/BIP with ABA with an r value of .47. To determine the strength of the relationship of the three EBP factors, they were rotated using the varimax rotation method. Table 5 shows the factor loadings for EBP per survey item. When the three factors were forced by the test of an eigenvalue > 1 and scree plot evaluation, reliability analysis as measured by the Chronbach's Alpha (α) score of .91 indicated a very high internal consistency.

Table 5.

Factor Loadings: Factor Analysis of EBP Survey Items

EBP Survey Item	Rotated factor loadings		
	PR (5-8, 12-14, 16-18)	FBA/BIP (1,2,3,4)	ABA (9,10,11,15)
Item Numbers Per Factor:			
1. I observe the students behavior to determine what causes the behavior to occur.	.36	.76	.05
2. I interview other people (parents or other teachers) to determine what causes the behavior to occur.	.15	.76	.18
3. I identify conditions that trigger the behavior (antecedents) so that they can be avoided.	.44	.76	.09

4. I determine the purpose or function of the behavior.	.30	.77	.20
5. I directly teach a more acceptable behavior or skill.	.66	.34	.25
6. I reinforce desirable behavior.	.77	.20	.17
7. I avoid reinforcing undesirable behavior.	.57	.23	.09
8. I use social reinforcement such as praise and attention for appropriate behavior.	.73	.09	.21
9. I use tangible reinforcement such as food or material rewards for appropriate behavior.	.19	-.06	.67
10. I use activities or privileges such as free time for appropriate behavior.	.13	.10	.78
11. I frequently measure the behavior (by counting or timing it) to see if it is occurring more or less often when I try to improve it.	.22	.37	.64
12. I change my interactions with students (e.g. by offering choices, by the way I speak) to try to improve their behavior.	.65	.39	.19
13. I change the physical arrangements or conditions in my classroom to try to improve behavior.	.53	.20	.22
14. I change my teaching approach with some students to try to improve their behavior.	.60	.42	.26
15. I use a structured behavior intervention plan based for students with more serious challenging behaviors.	.22	.35	.62
16. I use verbal de-escalation techniques to prevent escalation of inappropriate behaviors.	.50	.40	.30
17. I use redirection techniques to prevent escalation of inappropriate behaviors.	.63	.36	.21

18. I set clear expectations in my classroom to prevent inappropriate behaviors.	.63	.14	.05
--	------------	-----	-----

Note: Significant factor loadings > .40 are in boldface. EBP = Evidenced-based Practices. PR = Positive Reinforcement. FBA/BIP = Functional Behavior Assessment/Behavior Intervention Plan, ABA = Applied Behavior Analysis. Factors were rotated using the varimax rotation method.

PD Impact by Type and Topic

To answer the second research question: What is the relationship between teachers' use of evidence-based practices in managing challenging behaviors and how teachers value types and topics of professional development?, I conducted a two-tailed Pearson correlation test comparing the relationship between EBP and the value teachers place on that PD. The analysis resulted in an overall moderate correlation of r equal to .48. When evaluated separately, there were moderate correlations between both the use of EBP and PD type ($r = .43$) and the use of EBP and PD topic ($r = .42$). Item analyses were reported to ascertain how these variables independently impact educational practice regarding the use of EBP in managing challenging classroom behaviors.

Teachers were asked what types and topics of PD they had received specific to managing students with challenging behaviors. If the answer was "yes" to having received PD of a specific type or on a specific topic, then they could report on the level of impact of that PD using a 9-point unidirectional scale. If teachers responded "no", they were not able to rank the impact of that particular PD type or topic. It is important to note that nine percent (9%) of respondents reported having not received any of the four PD types, 34 % received none of the four PD topics, and 18 % had not received either of the PD types or topics on managing students with challenging behaviors.

Of those that had received some PD type or topic, the majority of teachers (67%)

reported that the most common type of PD they received on managing students with challenging behaviors was in-service in the form of modules, conferences, and workshops followed by university courses, pre-service or in-service, at 59 %. Fifty-four percent (54%) reported they received supports through school-wide programs such as PBIS or RtI. Only 37% stated coaching or mentoring as a type of PD received. That corresponded to well over half (63%) of teachers who had not received coaching or mentoring; nearly half (46%) have not received supports through school-wide programs; and, 41% who have not taken university courses on managing students with challenging behaviors.

Of those that responded with “yes” to the question as to whether or not a particular PD type impacted their practices, the majority ranked the impact to be between “some degree” with 21% of respondents using this option to “quite a bit” with 38% of respondents for all four PD types. Only one PD type ranked as having an impact of “a great deal” and that was coaching or mentoring where 18 % of respondents agreed.

As shown in Table 6, of those teachers that received a particular type of PD, based upon the mean rating per type, the PD type with the greatest impact on use of EBP in managing students with challenging behaviors was coaching/mentoring ($M=6.68$) followed by university courses ($M=6.01$) and modules/conferences/workshops ($M=6.00$). School-wide initiatives were rated somewhat lower, albeit with a respectable mean of 5.85. The mean refers to the range of responses from the 9-point unidirectional scale: 1 = none at all; 3 = very little; 5 = some degree; 7 = quite a bit; and, 9 = a great deal. A mean equal or above six was considered to indicate a moderate impact on their practices with regard to managing challenging behaviors. No statistical comparisons were calculated for

this study.

Table 6.

Professional Development Impact by Type

Type of PD	Received	%	Not Received	%	M	SD
University Courses	201	59	141	41	6.01	1.76
Modules/Conferences/ Workshops	228	67	114	33	6.00	1.71
Coaching/Mentoring	125	37	217	63	6.68	1.65
School-wide Programs (PBIS, RtI)	183	54	159	46	5.85	1.74

Note: PBIS refers to Positive Behavior Intervention Supports. RtI refers Response to Intervention. M = Mean. Mean is representative of responses to a 9-point unidirectional scale: 1 = none at all; 3 = very little; 5 = some degree; 7 = quite a bit; and, 9 = a great deal. SD = Standard Deviation

Teachers responded to questions inquiring about their perceptions of the impact of the PD topics they had received on managing students with challenging behaviors. For this group, PD on RtI had the highest occurrence at 45% followed by 37% having received PD on the topic of FBA/BIP. Ninety-one teachers or 27% reported they had received PD on the topic of PBIS. Two responders answered yes that they received PD on PBIS, but then did not respond to the second portion of the question ranking the impact of the PD topic. A minority of teachers at 18% received PD on the principles of ABA. This indicated that the majority of teachers had not received PD on these particular topics.

Of those that had received PD on these topics, the teachers responded by ranking the impact of the PD topic using the 9-point unidirectional scale ranging from one to nine

as follows: 1 = none at all; 3 = very little; 5 = some degree; 7 = quite a bit; and, 9 = a great deal. Overall, the PD topic that teachers rated as having the greatest impact on use of EBP in managing students with challenging behaviors was PBIS ($M = 6.49$) followed closely by principles of ABA ($M = 6.37$). The topics of FBA/BIP ($M = 5.98$) and RtI ($M = 5.45$) were reported to have a slightly less impact on teaching practices in managing challenging behaviors. Of these particular types of EBP or frameworks that incorporated use of EBP, means of all PD topics indicated teachers reported a moderate impact on their practices in managing students with challenging behaviors. In other words, the data indicated that if teachers received PD on any of these topics, most of these teachers reported they had an impact ranging from “some degree” to “quite a bit” on their teaching practices as indicated by a mean equal or above six with regard to managing students with challenging behaviors as shown in Table 7.

Table 7.

Professional Development Impact by Topic

Topic of PD	Received	%	Not Received	%	M	SD
Principles of ABA	63	18	279	82	6.37	1.78
FBA/BIP	128	37	214	63	5.98	1.86
PBIS	91	27	249	73	6.49	1.71
RtI	153	45	189	55	5.45	2.10

Note: PBIS topic had 2 missing responders. M = Mean. Mean is representative of responses to a 9-point unidirectional scale: 1 = none at all; 3 = very little; 5 = some degree; 7 = quite a bit; and, 9 = a great deal. SD = Standard Deviation.

In summary, findings indicated that teachers in public schools within this mid-Atlantic region reported modules, conferences, and workshops were the formats through

which most (67%) of the teachers received PD on managing students with challenging behaviors and teachers identified these PD experiences as having a moderate influence on their management of challenging behaviors for students in their classrooms. Coaching/mentoring (37%) was the least received of the four types explored in this study (see Table 6). Coaching/mentoring, while being the least PD type received, was the only one reported as having “a great deal” of impact for some respondents on teacher practices with regard to managing students with challenging behaviors.

Of those teachers that received PD on the selected topics addressing managing students with challenging behaviors, eighteen percent (18%) of respondents reported having received PD on the topic of principles of ABA and 27% indicated having received PD on the topic of PBIS. RtI (45%) followed by FBA/BIP (37%) were the highest percentage topics of PD received. However, the majority of teachers had not received PD on these particular topics (see Table 7). Like PD types, teachers identified these PD experiences as having a moderate influence on their management of challenging behaviors for students in their classrooms.

Overall, the means being representative of responses to a 9-point unidirectional scale for both PD types and topics had a moderate impact on teachers’ practices in managing challenging behaviors. In other words, of the teachers who reported they received any of these PD types on any of these PD topics, teachers reported they had an impact of “some degree” to “quite a bit” on their teaching practices as indicated by a mean equal or above six with regard to managing students with challenging behaviors.

Table 8 provides a summary of the intercorrelations of PD types and topics on use

of EBP in managing students with challenging behaviors. Further, the table also indicated the relationship between the various topics of PD as well as between the four different types of PD (University Courses, Modules/Conferences/Workshops, Coaching/Mentoring, and School-wide Initiatives such as RtI and PBIS).

Table 8.

Summary of Intercorrelations: Types and Topics of PD on use of EBP.

Measure	1	2	3	4	5	6	7	8
1. Total EBP	--	.93**	.81**	.79**	.43	.38	.38	.41
2. PR		--	.69**	.58**	.41	.37	.39	.37
3. FBA/BIP			--	.47	.43	.32	.32	.39
4. ABA				--	.28	.30	.23	.33
5. University Courses					--	.61**	.42	.51**
6. Modules/Conferences/Workshops						--	.61**	.62**
7. Coaching/Mentoring							--	.52**
8. School-wide Initiatives (RtI/PBIS)								--

Note: Correlation is significant at the 0.01 level (** $p < .01$, two-tailed). Total teacher responders to survey Section II: Total EBP (N=341). Total teacher responders that **received PD Type** on managing students with challenging behaviors: University Courses (N=200), Modules/Conferences/Workshops (N=227). Coaching/ Mentoring (N=124), School-wide Programs: RtI/PBIS (N=183). Total teacher responders on **impact of PD** received: University Courses (N=122), Modules/ Conferences/Workshops (N=227), Coaching/Mentoring (N=124), School-wide Programs: RtI/PBIS (N=183)

Results indicated the correlations between the uses of EBP ranged from moderate to strong. Total EBP was strongly correlated with PR ($r = .93$) followed by FBA/BIP ($r = .81$), and ABA ($r = .79$). A moderate relationship of $r = .47$ was indicated between the use ABA and FBA/BIP. With regard to relationships between types of PD and uses of

EBP, all correlations were moderate ranging from $r = .30$ to $r = .43$ with the exception of ABA to university courses ($r = .28$) and coaching/mentoring ($r = .23$) which were both weak. Finally, the results of the correlations between types of PD were strong and ranged from $r = .51$ to $.62$ for all but one moderate relationship between university courses and coaching/mentoring ($r = .42$).

EBP and Teacher Experience

The third correlation analysis explored the research question: What is the relationship between teachers' use of evidence-based practices and teacher experience in managing students with challenging behaviors? Using a two-tailed Pearson correlation at the 0.01 probability level of significance, the relationship was weak ($r = .02$). Therefore, a multiple regression test was conducted to determine what teacher characteristics were the strongest predictors with regard to teachers' use of EBP as defined in the current study and survey.

The multiple regression test looked at all of the other factors related to teacher experience – i.e., licensure, degree, teacher type, level of teaching, and intention to remain in the field in the next three to five years. Using a one-tailed Pearson correlation measure, only two factors emerged as predictors of teachers' use of EBP. These were grade level taught ($R = -.299$) and teacher type ($R = -.229$). Both were inversely related to use of EBP. In other words, teachers working at the elementary level reported greater use of EBP to manage challenging behaviors than their counterparts at the middle and high school levels. In fact, and perhaps important to remember, as the grade levels increased, the use of EBP decreased. The R-square value of .089 indicates that the grade level taught explained 9 % of the variance, while grade level combined with teacher type

(special or general educator) R-square value of .138 explained 14 % of the variance. The beta-value of -.29 indicates that the lower the grade level group (in this case, elementary: PK – 5th grade) had a relatively stronger influence on teachers using EBP in managing students with challenging behaviors followed by special education teacher type ($\beta = -.22$). Results indicated elementary grade level special education teachers were the most likely teacher type to use EBP in managing students with challenging behaviors. Table 9 shows the relationship between the variables of grade level taught and teacher type as they correlated to the use of EBP. Teacher type was explained in further detail by answering the last two research questions.

Table 9.

Grade Level Taught and Teacher Type: Predictive Values for use of EBP

Predictor	β	95 CI	R square	M	SD
1. Grade Level	-.299	-.534 - -.261	.089	1.76	.84
2. Teacher Type	-.222	-.860 - -.327	.138	1.78	.42

Note: Sample size of teacher responders (N=338). Stepwise Multi-Regression Analysis (ANOVA). 95% Confidence Intervals for β values. Dependent Variable EBP. M = Mean. SD = Standard Deviation.

TSE, EBP, and Teacher Type

Given that sample sizes were variant in that the number of general educators (N=263) far outweighed the number of special educators (N =76), a Levene's test for Equality of Variances was used as part of conducting *t*-tests to answer the last two research questions: What is the difference between general and special education teachers and their level of TSE and their use of EBP? On both measures, with equal variances assumed, the findings indicated that special educators reported a significantly higher TSE

than general educators and that special educators reported significantly higher use of EBP than general educators. Table 10 shows the mean for TSE for special educators was significantly higher at 6.6 whereas general educators scored a mean of 6.1. More significantly, special educators' use of EBP scored a mean of 7.2 with general educators at 6.6 significant at the .001 level of probability. Results indicated there exists a significant difference between teacher type with special educators reporting higher sense of teacher efficacy and use of EBP when managing students with challenging behaviors. Table 10.

Difference Between Teacher Type to TSE and use of EBP

Variable	<u>Special Education</u>			<u>General Education</u>			<i>t</i>	Sig.(2-tailed)
	<i>n</i>	M	SD	<i>n</i>	M	SD		
TSE	76	6.6	1.32	263	6.1	1.07	3.22	.001***
EBP	76	7.2	1.08	262	6.6	1.09	4.31	.000***

Note: The variation in *sample size* is due to one participant not responding to Section II of survey on EBP. Independent sample *t*-tests with equal variances assumed. Probability is significant at the 0.01 level (****p* < .001, two-tailed, ** *p* < .01, two-tailed, * *p* < .05, two-tailed). *n* = Number of responders. M = Mean. SD = Standard Deviation. *t* = *t* score.

To further understand the relationships between TSE and use of EBP with regard to teacher types (special and general education) and grade levels taught (elementary, middle, and high school), correlation analyses were conducted. Overall, the group with the strongest relationship between TSE and use of EBP were special education teachers as compared to general education teachers. As shown in Table 11, the high school special education teachers showed the strongest correlation between their perceptions of TSE and use of EBP ($r = .849$) followed by elementary special education teachers ($r = .728$) and middle school special education teachers ($r = .660$). Of the general education

teacher groups, middle school teachers had the strongest correlation between TSE and use of EBP ($r = .634$). High school and elementary general education teachers' correlations between TSE and use of EBP were both moderate with $r = .522$ and $r = .502$, respectively. These results indicated that of all teacher types and grade levels, elementary general education teachers reported the weakest relationship between their perceptions of TSE and use of EBP to manage students with challenging behaviors ($r = .502$).

Table 11.

Correlations: TSE, use of EBP, Teacher Type, and Grade Level Taught.

Variable	Special Education				General Education			
	<u>Elementary (PK-5th)</u>				<u>Elementary (PK-5th)</u>			
	<i>n</i>	M	SD	<i>r</i>	<i>n</i>	M	SD	<i>r</i>
TSE	39	6.43	1.37	.728**	130	6.29	.97	.502**
EBP	39	7.28	1.06	.728**	130	6.96	.94	.502**
Variable	<u>Middle (6 -8th)</u>				<u>Middle (6 -8th)</u>			
	<i>n</i>	M	SD	<i>r</i>	<i>n</i>	M	SD	<i>r</i>
TSE	19	6.82	1.20	.660**	62	6.02	1.21	.634**
EBP	19	7.19	.93	.660**	62	6.60	1.09	.634**
Variable	<u>High (9 -12th)</u>				<u>High (9 -12th)</u>			
	<i>n</i>	M	SD	<i>r</i>	<i>n</i>	M	SD	<i>r</i>
TSE	18	6.76	1.40	.849**	70	6.00	1.11	.522**
EBP	18	6.96	1.30	.849**	70	6.09	1.00	.522**
TOTAL	76				262			

Note: Correlation is significant at the 0.01 level (** $p < .01$, two-tailed, * $p < .05$, two-tailed). Total teacher responders to all survey items (N=338). *n* = Number of responders. M = Mean. SD = Standard Deviation. *r* = correlation.

Although high school special education teachers reported to have a stronger

correlation between TSE and use of EBP to manage students with challenging behaviors, elementary special education teachers reported the highest use of EBP in managing challenging behaviors with the EBP mean score of 7.28 followed by the middle school special education teachers with a mean of 7.19 (see Table 11). This interpretation is supported by the multiple regression results (see Table 9) that demonstrated that elementary grade level special teachers reported a higher use of identified EBP in managing students with challenging behaviors than the middle and high school level teachers.

Summary

A total of 342 participants (18%) responded to this on-line survey with 338 respondents answering all survey items. Results indicated there was a strong correlation ($r = .61$) between TSE and their use of EBP for managing challenging behaviors ($p < .01$). Factor analysis of the adapted version of the Tschannen-Moran and Hoy's (2001) TSE survey in managing students with challenging behaviors produced one single total factor strongly suggesting statistically high internal reliability with a Chronbach's Alpha (α) score of .93. Results indicated if a teacher were to rate a belief on one item, they would rate similarly on the others with regard to managing students with challenging behaviors. These results were contrary to Tschannen-Moran and Hoy's (2001) analysis of their original TSE instrument factoring strongly into the three areas of classroom management, student engagement, and instructional strategies. Modifying the TSE instrument by embedding the phrase *with challenging behaviors* into each TSE question significantly impacted the factor loading results and resulted in a new factor interpretation for TSE and managing challenging behaviors.

The correlation between teachers' use of EBP in managing challenging behaviors and how teachers value types and topics of PD was moderate with $r = .43$ ($p < .01$).

Factor analysis of teachers' use of EBP in managing students with challenging behaviors produced three significant factors to explore. The strongest factor was labeled Positive Reinforcement (PR). The other two factors were labeled FBA/BIP and ABA. Each had significant factor coefficients: PR ($r = .90$), FBA/BIP ($r = .85$), and ABA ($r = .79$). There were also strong relationships between each factor. PR was more strongly correlated with FBA/BIP ($r = .69$) than with ABA ($r = .58$), followed by FBA/BIP with ABA ($r = .47$). To determine the strength of the relationship of the three EBP factors, they were rotated using the varimax rotation method. When the three factors were forced by the test of eigenvalue > 1 , reliability analysis as measured by the Chronbach's Alpha (α) score of .91 indicated a very high internal consistency. This indicates that if teachers used one type of EBP, then they were likely to be using all of them.

Correlation analyses were then run to discern the relationship of the three EBP factors and four types of PD – i.e., university courses, modules/conferences, and coaching/ mentoring, and systems approach (RtI/PBIS). Results indicated teachers reported all types of PD impacted their use of EBP with correlations ranging from $r = .42$ to $r = .62$. A Total EBP factor was included in the summary of intercorrelations due to the high internal consistency between all EBP factors. Again, the Total EBP factor was very strongly correlated with each of the other EBP factors as follows: Total EBP: PR ($r = .93$), Total EBP: FBA/BIP ($r = .81$), Total EBP: ABA ($r = .79$). A moderate relationship was indicated between the use ABA and FBA/BIP ($r = .47$). Correlations between types of PD and uses of EBP were moderate ranging from $r = .30$ to $r = .43$ with the exception

of ABA to university courses ($r = .28$) and coaching/mentoring ($r = .23$) which were both weak. Finally, the results of the correlations among types of PD were strong and ranged from $r = .51$ to $.62$ for all but one moderate relationship between university courses and coaching/mentoring ($r = .42$).

The relationship between teachers' use of EBP and years of experience was weak ($r = .02$). A multiple regression test was conducted to determine what teacher characteristics were the strongest predictors with regard to teachers' use of EBP. Only two factors emerged as predictors of teachers' use of EBP – grade level taught ($R = -.299$) and teacher type ($R = -.229$). Both were inversely related to use of EBP in that teachers working at the elementary level reported greater use of EBP for managing challenging behaviors than their counterparts at the middle and high school levels. As the grade levels increased, the use of EBP decreased. The grade level taught explained nine percent of the variance while grade level combined with teacher type (special or general educator) explained 14 percent of the variance. Based upon teacher report, results indicated elementary grade level special education teachers are more likely to use EBP in managing students with challenging behaviors.

To further understand the relationships between TSE and use of EBP with regard to teacher types (special and general education) and grade levels taught (elementary, middle, and high school), additional correlations were conducted. Overall, the group with the strongest relationship between TSE and use of EBP were special education teachers versus general education teachers. High school special education teachers showed the strongest correlation between their perceptions of TSE and use of EBP ($r = .849$). Of the general education teacher groups, middle school teachers had the strongest

correlation of TSE and use of EBP ($r = .634$). These results indicated that of all teacher types and grade levels, elementary general education teachers had the weakest relationship between their perceptions of their own TSE and use of EBP to manage students with challenging behaviors ($r = .502$). Although high school special education teachers had a stronger correlation between TSE and use of EBP to manage students with challenging behaviors, elementary special education teachers reported the highest use of EBP in managing challenging behaviors ($M = 7.28$) followed by the middle school special education teachers ($M = 7.19$).

In order to discern any differences between their TSE and use of EBP, *t*-tests were conducted for each teacher type – special and general education teachers. TSE for special educators was significantly higher ($M = 6.6$) than their general educator counterparts ($M = 6.1$). More significantly, special educators' use of EBP scored a mean of 7.2 with general educators at 6.6 given .001 level of probability. Results indicated there exists a significant difference between teacher type with special educators reporting higher sense of teacher efficacy and greater use of EBP when managing students with challenging behaviors.

Interpretations of these findings as they link to relevant literature and previous studies on the topics of TSE, use of EBP, teacher experience, and teacher type will be addressed in Chapter V. A critique of this study along with implications for educators in the field will be provided in the final chapter as well. Finally, recommendations for future research will be offered.

CHAPTER V: Summary of Findings

A total of 342 participants responded to the *Relationship Between Teacher Self-Efficacy Beliefs and Use of Evidence-based Practices in Managing Students with Challenging Behaviors Survey* with 338 of those answering all survey items. The majority of the responders were general educators. Half of all teachers worked at the elementary level. Nearly all teachers had professional or collegiate licenses. A large majority of responders had over 10 years of teaching experience. An overwhelming majority said that they plan to stay in the teaching field for at least the next three years.

Results indicate there is a strong correlation between TSE and use of EBP ($r = .61$). In other words, if a teacher is highly self-efficacious about managing students with challenging behaviors, it is very likely that they will also use EBP in managing students with challenging behaviors or vice-versa. For example, if a teacher uses EBP to manage students with challenging behaviors, it is likely they will experience success and will thereby enhance their sense of teacher self-efficacy.

Factor analysis of TSE in managing students with challenging behaviors produced one single Total TSE factor. Reliability analysis indicated a very high internal consistency ($\alpha = .93$). Tschannen-Moran and Hoy's (2001) analysis of their original TSES instrument factored strongly into the three areas of classroom management, student engagement, and instructional strategies. Modifying the TSE instrument by adding the phrase *with challenging behaviors* after the word "students" significantly impacted the factor loading results.

Factor analysis of teachers' use of EBP in managing students with challenging behaviors produced three significant factors: Positive Reinforcement (PR), FBA/BIP and

ABA. Factor analysis of EBP for managing students with challenging behaviors loaded together as the PR factor explaining 44 % of the variance with factor coefficients that ranged from .50 to .76. The other two factors, FBA/BIP and ABA, were comprised of four survey items each. The FBA/BIP factor explained eight percent (8%) of the variance with factor coefficients ranging from .76 to .77. The third factor, ABA, explained six percent (6%) of the variance with factor coefficients ranging from .62 to .78. Reliability analysis indicated a very high internal consistency ($\alpha = .91$).

A two-tailed Pearson correlation test comparing the relationship between EBP and the value teachers place on that PD resulted in an overall moderate correlation ($r = .48$). When evaluated separately, there were moderate correlations between both the use of EBP and PD type ($r = .43$) and the use of EBP and PD topic ($r = .42$). Of the teachers who reported receiving any of these PD types on any of these PD topics, teachers reported they had an impact of “some degree” to “quite a bit” on their teaching practices with regard to managing students with challenging behaviors.

A majority of teachers (67%) received modules/ conferences /workshops followed by university courses (59%) on topics related to use of EBP in managing students with challenging behaviors. That suggests a large portion of teachers, 33 and 41 percent, respectively, never received PD on topics related to use of EBP in this area of classroom management. Fifty-four percent (54%) of the respondents participated in school-wide initiatives with only 37% receiving PD in the form of coaching/mentoring. That means that nearly half of the teachers in this sample have not participated in RtI or PBIS initiatives and over 60% have not received the benefit of coaching or mentoring with regard to managing students with challenging behaviors (see Table 6). Given the

research on the positive impact of using EBP to manage challenging behaviors through multi-tiered frameworks or systems approach such as RtI and PBIS, respectively, would suggest that educational leaders need to scale up the implementation of such programs to enhance teachers' behavior management skills and improve student outcomes. Policy makers may ramp-up initiatives for both RtI and PBIS at the state and local levels.

Finally, the majority of all teachers have not received PD on use of EBP by topic: ABA (83%), PBIS (73%), FBA/BIP (63%), and RtI (55%). Further, it is important to note that nine percent (9%) of respondents reported having not received any of the four PD types, 34 % received none of the four PD topics meaning that 18 % of the total number of respondents had not received either of the PD types or topics on managing students with challenging behaviors. This suggests that teachers need more opportunities to learn about use of EBP on managing challenging behaviors. Given that they have not received PD on these topics, it is not likely they would implement them, let alone, with fidelity.

Correlation between teachers' use of EBP and years of experience was weak ($r = .02$). However, two factors related to teacher experience emerged as predictors with regard to use of EBP – i.e., grade level taught and teacher type. Results indicated special education teachers working at the elementary grade levels are more likely to use EBP in managing students with challenging behaviors. This is an indication that educational leaders need to provide opportunities for special education teachers to share this essential skill set with their general education teacher peers.

With regard to teacher types (special and general education) and grade levels taught (elementary, middle, and high school), the group with the strongest relationship

between TSE and use of EBP were special education teachers versus general education teachers. High school special education teachers showed the strongest correlation between their perceptions of TSE and use of EBP. Of the general education teacher groups, middle school teachers had the strongest correlation of TSE and use of EBP. These results indicated that of all teacher types and grade levels, elementary general education teachers reported the weakest relationship between their perceptions of TSE and use of EBP to manage students with challenging behaviors. Although high school special education teachers reported to have a stronger correlation between TSE and use of EBP to manage students with challenging behaviors, elementary special education teachers reported the highest use of EBP in managing challenging behaviors.

Interpretations of Results

It was not surprising to find a strong correlation between TSE for managing challenging behaviors and use of EBP for managing challenging behaviors ($r = .61$) given that highly efficacious teachers tend to be more persistent, are better able to manage stress, and maintain higher expectations for themselves and of their students as reported by multiple researchers (Brouwers & Tomic, 2000; Chambers, Henson, & Sienty, 2001; Evers, Gerrichhauzen, & Tomic, 2000; Gibson & Dembo, 1984; Hoy, 2000; Mergler & Tangen, 2010; Ross & Bruce, 2007; Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2001). . Moreover, they tend to persist with high expectations for both themselves as an effective teacher and for their students' outcomes. Bembenutty's (2009a, 2009b) study linked high TSE with the ability to self-regulate their emotions, control their environment, delay gratification, and motivate students. Several studies found classroom management was strongly correlated with high TSE (Bembenutty, 2009a & 2009b;

Gordon, 2001, Tschannen-Moran & Hoy, 2001). High student engagement and effective instructional strategies were also found to be strongly correlated to high TSE as reported in Tschannen-Moran and Hoy's 2001 study. These describe the characteristics of persons who will seek out whatever is necessary to meet or exceed their goal. In this case, it is finding the tools (EBP) needed to effectively manage students with challenging behaviors such that the learning process is not disrupted and student outcomes are improved.

It was somewhat surprising to find a moderate correlation between teachers' use of EBP and impact on practice by types ($r = .43$) and topics ($r = .42$) of PD. This is especially so given that many researchers and professional organizations consider PD as being of major concern (NSDC, 2009), an integral part of the profession (Garet et al., 2001), and even critical (Bredeson, 2000) in bringing about needed change in teachers' use of EBP to improve student outcomes (Guskey, 2002). An interesting finding in this study was that many teachers reported that they did not receive any of the four types or topics on managing students with challenging behaviors.

Some claim the issue with regard to determining the impact of PD on use of EBP may be due, in part, to the lack of empirical data on what exactly does constitute effective PD (Garet et al, 2001; NSDC, 2009; Wilson & Berne, 2009). For instance, Garet et al. (2001) argued PD type did not matter as much as duration of the PD event. Ross and Bruce (2007) found fall and spring workshops to have a significant impact on teachers' confidence in implementing effective classroom management skills, while Dunst et al. (2011) make a sound case that enhanced field-based PD is far superior to any other type of PD.

Others purport that PD events, regardless of type, simply do not have the needed

intensity, follow-up, or relevance to be effective in changing teaching practices (Garet et al., 2001; Guskey, 2002; Helmer et al., 2010; NSDC, 2009). Kretlow and Bartholomew's (2010) extensive review of the research raised yet another related issue in that, even though teachers may receive high caliber PD, without sustained supports to follow, implementation fidelity of EBP is likely to be compromised (Burns & Ysseldyke, 2009; Kretlow & Blatz, 2011; Williams & Coles, 2007). Williams and Coles (2007) found that although teachers expressed positive attitudes towards using EBP, their rate of implementation in the classroom was limited due to lack of time, access to resources, and not knowing how to effectively search for EBP to meet their needs. Indeed, Burns and Ysseldyke (2009) found that special educators would use whatever EBP they could get access to even though it may be considered to have little research support as an EBP. According to many, a coaching component was considered to be the missing link in PD practices (Burns & Ysseldyke, 2009; Dunst, et al 2011; Garet, et al. 2001; Helmer, et al 2011; Kretlow & Bartholomew, 2010; Kretlow & Blatz, 2011; Williams & Coles, 2007).

In summary, core features of effective PD committed to changing teacher practices to improve student outcomes will focus on relevant content, promote active learning, and foster coherence among professionals with a coaching component. In doing so, teachers will be afforded the supports they need to implement EBP with fidelity and sustain effective practices. The underlying theme that emerged was the need for a bridge from theory to practice. Finally, if effective PD can increase use of EBP with fidelity and TSE is strongly correlated with use of EBP, then it follows that effective PD could potentially enhance TSE.

Results of this study did indicate moderate correlations between use of EBP and

type or topic of PD. Factor analysis resulted in three factors as well as a Total EBP factor. All had strong factor coefficients ranging from .79 to .90 and high internal consistency ($\alpha = .91$). The Total EBP strongly correlated with the Positive Reinforcement (PR) factor ($r = .93$). This is in keeping with Marzano, et al. (2002) meta-analysis study that strategies considered to be EBP in managing students with challenging behaviors included teacher-directed actions of providing feedback, reinforcing effort, and providing recognition.

It is noteworthy to add that the topics of PD were strongly correlated to each other (PR: FBA = .69, PR: ABA = .58, FBA: ABA .47) while types of PD had moderate correlations to use of EBP ranging from .31 to .43 (Table 8). This suggested PD topics impacted practice more than types of PD when it comes to learning effective ways of managing students with challenging behaviors. All PD had at least a moderate relationship to use of EBP in managing challenging behaviors. The implication is that PD is beneficial regardless of type.

The third correlation test found the relationship between the use of EBP and teacher experience was weak ($r = .02$). This was surprising given that multiple research studies found teaching experience to be strongly correlated with TSE. Since this study found TSE was found to be strongly correlated with use of EBP ($r = .61$), the logical expectation was that use of EBP would also strongly correlate with teacher experience.

Kotaman (2010) found experienced teachers scored significantly higher in terms of TSE than prospective teachers. Longitudinal studies by Hoy (2001) and Mergler and Tangen (2010) also found efficacy in classroom management increased significantly over time. Tschannen-Moran, et al. (1998) claimed TSE solidified over time and the “helping

teachers develop strong efficacy beliefs early in their career will pay lasting dividends” (p. 234). The different findings in this study may possibly be due to the focused topic being on managing students with challenging behaviors versus use of EBP in general. Grade level taught explained nine percent of the variance ($R^2 = .138$) while grade level combined with teacher type explained 14 percent of the variance ($R^2 = .089$). Grade level was also a slightly stronger predictor ($\beta = -.29$) than teacher type ($\beta = -.22$) for use of EBP in managing students with challenging behaviors.

However, a multiple regression ANOVA test found two factors related to teacher experience had strong correlations to use of EBP. One was grade level taught and the other was teacher type – i.e., special education versus general education. Both were inversely related to use of EBP in that teachers working at the elementary level reported greater impact of using EBP to managing challenging behaviors than their counterparts at the middle and high school level. As the grade level increased, the use of EBP decreased. Lopes, et al. (2004) found similar results in their study reporting secondary level teachers expressed more negative feelings toward their students that presented challenging behaviors. Baker’s (2005) findings concurred reporting “secondary educators reported being significantly less able, willing, and ready to manage challenging student behaviors than their colleagues at lower grade levels” (p. 1). Overall, results from this study indicated elementary grade level special education teachers are more likely to use EBP in managing students with challenging behaviors. Another explanation for this finding is that teachers at the lower grade levels may be more child-centered than their secondary colleagues who may be more content-oriented. Further, teachers of younger students may feel they have the potential for greater impact in changing behaviors before patterns

are established.

The last two research questions centered around whether or not there were differences between teacher types and their TSE as well as their use of EBP. So, *t*-tests were conducted for each teacher type – special and general education teachers. TSE for special educators was significantly higher ($M = 6.6$) than their general educator counterparts ($M = 6.1$). More significantly, special educators' use of EBP scored a mean of 7.2 with general educators at 6.6 given .001 level of probability. Results indicated there exists a significant difference between teacher type with special educators reporting higher sense of teacher efficacy and use of EBP when managing students with challenging behaviors. This may be explained in that special education teachers typically teach students with challenging behaviors that are characteristic of the students' disabilities. Therefore, special education teachers may have more experience in teaching students with challenging behaviors. As a result, they may be better prepared to use EBP in managing challenging behaviors.

Liljequist and Renk (2007) found both teacher types to be equally high with regard to TSE. Literature review on this subject was either limited or compromised by integrity of the research methodology (Almog & Schechtman, 2001; Westling, 2010) or cultural influences (Almog & Schechtman, 2001; Lopes et al., 2004). With regard to use of EBP, both Almog and Schechtman's (2001) and Westling's (2010) study reported teachers, irrespective of type, did not feel adequately prepared to effectively manage students with challenging behaviors.

An encouraging note, however, is that multiple studies indicated that teachers with high TSE, regardless of type, believe that all students can learn, put more effort into

meeting the learning needs of their students, set higher goals for themselves as well as their students, and persist despite seemingly insurmountable challenges (Brouwers & Tomic, 2000; Chambers, Henson, & Sienty, 2001; Evers, Gerrichhauzen, & Tomic, 2000; Gibson & Dembo, 1984; Hoy, 2000; Mergler & Tangen, 2010; Ross & Bruce, 2007; Tschannen-Moran, et al. 1998; Tschannen-Moran & Hoy, 2001).

Critique of Study

Although not related to any of the five research questions, the final survey question asked participants to indicate how many students were on their caseload and, of those, how many exhibited challenging behaviors. Participants were asked to provide this information per four disability categories along with the number who were not identified with a disability. The intention was to gather other information that may help in understanding which group of students presented the most challenging behaviors. Many participants did not respond at all. The error in developing this portion of the survey was to leave each response field populated with a zero, allowing participants to bypass this section, in part or all, and still complete the survey. A forced choice built into the survey would have prevented this situation.

Rewording this portion of the survey is another consideration for future studies. For instance, knowing which teacher type (i.e., special versus general educator) may have been informative in that special educators are more likely to know their caseload numbers by disability. Some individuals employed in the division that the researcher works offered that they did not respond because they did not know this information. So, rather than providing inaccurate information, one P.E. teacher chose not to respond at all. This is disconcerting in that all teachers are required by legal mandate to fully implement a

student's IEP as written. If they do not even know which students in their charge are identified as SWD with specific goals and accommodations, then they cannot possibly be following the IEP. Another related arts teacher offered that this part of the survey took the most time if responses were to be accurate. This particular participant shared that he had to access other databases to respond with accuracy. For this reason, this section of the survey may even be eliminated altogether.

Finally several responders rated the second part of the question (How many of those students exhibit challenging behaviors in the following categories?) with a greater number than the first one (How many students are on your caseload this year?). This is an indication that either the question was poorly worded or that they did not comprehend the question properly. As a result, this section was excluded from the data analysis. Incidentally, during the pilot survey, this issue was not raised by any of the responders. It is noted that this section of the survey was informational only and not linked to any research question.

Implications of Study

The recurrent theme that emerged from this study is, regardless of teacher type or experience level, there is a serious concern with a gap between theory and practice with regard to implementing EBP with fidelity to effectively manage students with challenging behaviors. The implication is that teachers need targeted, sustained PD that is relevant and actively engages them as educators in using EBP to effectively manage students with challenging behaviors. The overarching issue is not to merely be in compliance with legal mandates, but to preserve the learning process such that all students have the opportunity to reach their potential, both academically and

behaviorally. As a result, it is more likely that student outcomes will improve and TSE is enhanced.

At the core of Bandura's theoretical construct is how self-efficacy beliefs are created. The most powerful and primary source of input is through, *mastery experience*, or interpretation of previous performance. *Vicarious experience* is another source of information via observations of others modeling or performing tasks. *Social persuasions* are sources of information made by others in the form of verbal judgments such positive encouragement or negative appraisals. Positive persuasions enhance self-beliefs while negative ones weaken them. *Somatic and emotional states* are expressed by one's reaction to thinking about performing an action (e.g., stress). Self-efficacy beliefs are improved by reducing negative emotional states. As teachers develop their sense of efficacy, it will impact their capacity to respond to students that present challenging behaviors.

To truly enhance TSE and use EBP with integrity, educational leaders will need to provide PD events that are content specific (managing challenging behaviors), promote active learning (provide models with time for hands-on, real life applications of EBP), and foster coherence among professionals (allow time and encourage reflection on effectiveness and impact of practices). Finally, there must be a coaching component if the use of EBP is to be implemented with fidelity and to be sustained over time. In doing so, as teachers gain confidence in their skills to manage students with challenging behaviors followed by positive student outcomes, their sense of teacher efficacy will be enhanced. This is a reasonable step in bridging the gap between theory and practice.

Establishing an essential professional knowledge base will naturally begin

through completion of university courses (unless teachers matriculate through alternate licensure routes, as many do), followed by in-service training events while serving in the field to include individual mentoring, coaching, and participation in school-wide initiatives. First and foremost, however, is creating the foundation upon which all effective teaching and learning occurs. That is, preparing prospective teachers with the essential knowledge, skills, and instructional practices to promote positive student outcomes. This will be made evident in the form of increased student engagement, implementation of EBP with fidelity, and improved student learning both academically and behaviorally. The process begins with setting professional standards to address academic and behavioral prowess for all future teachers.

Teachers will need to be supported through this process. Researchers Bambura, Nonnemacher, and Kern (in press) revealed the power of administrative leadership and support in the form of efficient use of time coupled with ongoing PD as recommended practice. Specifically, school leaders can support effective practices through allocation of available resources, intensity and frequency of PD opportunities, and promotion of collaboration and communication as contributing factors to the managing of students with challenging behaviors in public schools.

As educators explore how to increase teachers' knowledge and provide essential supports in the effort to promote their sense of efficacy, it will be wise to remember Fullan's (2001) warning that with any change initiative, leaders "cannot bulldoze change" (p. 9). In the process of learning to effectively manage students with challenging classroom behaviors, schools as learning organizations are going to have to adjust to the demands of the change process as they are challenged to educate a diverse population of

students with significant behavioral issues. This will take a collective effort from not only stakeholders within the school community, but also collaboration with and among community agencies, particularly when working with students with mental health issues. In short, educational leaders will need to provide on-going, targeted PD for educators on how to effectively manage students with challenging behaviors. This will entail a review of current policies and procedures along with an examination and possible reallocation of resources. A change in policy quickly facilitates the change process.

Policy is about making choices often in the midst of opposing forces such as social, political, and financial pressures. According to Fowler (2004), “public policies are responses to the complex dynamics of a specific social setting” (p. 55). Guthrie and Schuermann (2010) define policy as “a uniform plan or course of action intended to guide organizational behavior or agency practice” (p. 105). Policy makers are challenged to establish priorities given the constantly shifting mix of public opinion and political power within the confines of limited resources. In other words, policy makers need to be cognizant of the policy environment to effectively respond to complex social dimensions including but not limited to values or beliefs, demographic trends, and economics forces of a specific setting at a particular time (Fowler, 2004; Guthrie & Schuermann, 2010). Policy makers are charged to respond to the federal legal mandates in conjunction with a growing and diverse student population that present challenging behaviors in public schools.

There exist real and lasting implications for school leaders with regard to the federal and state mandates placed upon public schools surrounding the issue of addressing students with challenging behaviors. With the inclusion of varied populations

in public schools per unfunded or partially funded federal mandates such as ESEA and IDEA, educational policy makers need to develop policies to do more with less. If leaders are not cognizant of or do not heed the legal mandates required to govern special education policy and procedures, the potential of negative fiscal impact on school divisions can be significant. Special education is steeped in legalities and regulatory requirements. School leaders must avail themselves of legislative actions, including legal jargon, which drive school policy and procedure. According to McLaughlin and Nolet (2004), “principals must understand the core special education legal foundations or *entitlements*” (p. 3). If they do not, they could cost the school division they represent substantial monetary burdens, as well as undue stress and civil litigation enacted toward individual employees or the school system.

Educational policy makers will need to analyze all aspects of the educational system – *demographic* by recognizing that more diverse students with more complex and challenging behaviors are accessing public schools; *economic* by reckoning with the reality that leaders must do more with less; *social* by recognizing the validity of addressing challenging behaviors to improve student outcomes academically and behaviorally; and *political* by awareness of need for alignment of multiple legal mandates such as ESEA and IDEA. In addition, educational policy makers will need to create and implement a mechanism to accurately collect and analyze data with regard to this pressing issue in order to measure whether policy goals were attained or not and then develop corrective action plans accordingly.

Recommendations for Future Research

Study of TSE merits continued attention in its capacity to impact positive student

outcomes. The inherent implication is that by supporting and enhancing TSE, not only are student outcomes improved, but teacher practices are positively impacted as well. It would be interesting to expand this study to other regions or states. A focus on building level administrators' sense of efficacy in supporting teachers' use of EBP would also be of interest to determine how to support leaders in providing targeted PD for teachers. Finding answers as to why elementary special education teachers use EBP more than general education teachers would be helpful in knowing why and what supports teachers need at various grade levels. Further, it would be interesting to explore why high school special education teachers reported a stronger relationship between their perception of TSE and use of EBP than their elementary level counterparts to manage students challenging behaviors.

Summary

This study provides information on how to offer more targeted guidance and supports to educators is provided, for both pre-service and in-service programs, in an effort to enhance teachers' knowledge to effectively manage challenging classroom behaviors. By increasing teachers' knowledge on how to implement EBP to effectively manage challenging behaviors, daily practices of classroom management will be positively impacted. The primary goal is to improve student outcomes academically and behaviorally through effective management of students with challenging behaviors. Secondly, discovering ways to enrich teachers' sense of self-efficacy is important in that TSE is highly correlated with positive student outcomes and learning environments. In addition, learning useful ways to support teachers positively contributes to the teaching profession. In the end, the research knowledge base of teachers' perceptions, beliefs, and

practices to effectively manage students with challenging behaviors is enhanced.

Efficiency matters as policy makers analyze the need for change within their social context and recognize the importance of the economic environment. Educational leaders need to be keenly attuned to the social context and how it is changing to not only avoid wasting valuable resources, but to be better prepared to interpret the rapid flow of policy changes while building the confidence to act constructively (Bryson & Crosby, 1992; Evans, 1997; Fowler, 2004; Gallagher, 1997). Policy makers need to address the need to provide appropriate training for school administrators, teachers, and staff members (Darling-Hammond, & Richardson, 2009; Ingvarson, Meiers, & Beavis, 2005). Darling-Hammond and Richardson urge leaders to “examine the policies used by states and localities where high-quality professional development is widely available” (NSDC Powerpoint presentation, 2009, Slide 20).

As with any reform effort, “it is unreasonable to expect teachers and administrators to change behavior or practice without substantive training. Without training, teachers are more likely to be frustrated and less confident, thus reducing the potential benefits of the intervention” (Evans, 1997, p. 67). In this case, it is the allocation of funds to support teachers with the essential tools to effectively manage challenging classroom behaviors in schools, including those with disabilities and significant behavioral problems. Educational leaders will need to prioritize PD for teachers that focus on relevant topics (use of EBP to manage challenging behaviors) to exact change (positive learning outcomes). A logical first step is to close the gap between theory and practice by providing PD opportunities for teachers, pre-services and inservice, to increase their knowledge of EBP while simultaneously enhancing their TSE

in an effort to effectively manage students with challenging behaviors.

References

- Abidin, R. R., & Robinson, L. L. (2002). Stress, biases, or professionalism: What drives teachers' referral judgments of students with challenging behaviors. *Journal of Emotional and Behavioral Disorders, 10*, 204-212.
- Almog, O., & Schechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *Journal of Special Needs Education, 22* (2), May 2007, 115-129.
- American Association of School Administrators (AASA). (2009). *Response to intervention survey results*. Retrieved from http://www.spectrumk12.com/campaign/rti_survey_results
- Amos, P. A. (2004). New considerations in the prevention of aversives, restraint, and seclusion: Incorporating the role of relationships into ecological perspectives. *Research and Practices for Persons with Severe Disabilities, 29*(4), 263-272.
- Atkins, M. (2003). Positive behavior intervention supports for all. In C. Newman, C. Liberton, K. Kutash, & R. Friedman (Eds.), *The 15th Annual Research Conference Proceedings: A System of Care for Children's Mental Health: Expanding the Research Base* (pp. 205-206). Tampa, University of Southern Florida, Research and Training Center for Children's Mental Health. (ERIC Document Reproduction Service No. ED477666). Retrieved from <http://www.gpoaccess.gov/eric/200212/ed465253.pdf>
- Baer, D.M., Wolf, M.M., & Risley, T.R. (1968). Some current dimensions of applied behavior analysis'. *Journal of Applied Behavior Analysis, 1*(1), 91-97.

- Baker, P. H. (2005). Managing student behavior: How ready are teachers to meet the challenge? *American Secondary Education*, 33 (3), 51-64.
- Bambara, L. M., Nonnemacher, S., & Kern, L. (in press). Sustaining school-based individualized positive behavior support: Perceived barriers and enablers. *Journal of Positive Behavior Interventions*.
- Bandura, A. (1997). *Self-Efficacy: The exercise of control*. New York: W. H. Freeman.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (2001). Social cognitive theory: An agentive perspective. *Annual Review of Psychology*, 52, 1-26.
- Barnett, T. (2006). *Reinforcement theory*. Farmington Hills, MI: Thompson Gale.
- Retrieved on 3/08/11 from <http://www.referenceforbusiness.com/management/PrSa/Reinforcement-Theory.html>
- Bembenutty, H. (2009a). Academic delay of gratification, self-regulation of learning, gender differences, and expectancy-value. *Personality and Individual Differences*, 46, 347-352.
- Bembenutty, H. (2009b). *Teachers' self-regulation: Using cartoons to reflect teachers classroom management skills, self-efficacy and students' academic delay of gratification*. A paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Benner, G.L., Nelson, J.R., Sanders, E.A., & Ralston, N.C. (2012). Behavior intervention for students with externalizing behavior problems: Primary-level standard protocol. *Exceptional Children*, 78 (2), 181-198.

Bredeson, P.V. (2000). Teacher learning as work and at work: exploring the content and contexts of teacher professional development. *Journal of In-service Education*, 26(1), 63-72.

Brouwers, A., & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education*, 16, 239-253.

Brownell, M.T., Sindelar, P.T., Kiely, M.T., & Danielson, L.C. (2010). Special education teacher quality and preparation: Exposing foundations, constructing a new model. *Exceptional Children*, 76 (3), 357-377.

Bryson & Crosby (1992). *Leadership for the Common Good: Tackling Public Problems in a Shared Power World*. San Francisco: Jossey-Bass.

Burns, M., & Ysseldyke, J. (2009). Reported prevalence of evidence-based instructional practices in special education. *The Journal of Special Education*, 43, 3-11. Doi: 10.1177/0022466908315563.

Bushaw, W. J., & Lopez, S.J. (2010). A time for change: The 42nd Phi Delta Kappa/gallup Poll of the public's attitudes toward public schools. *Phi Delta Kappan*, 92 (1), 9 - 26.

Carr, E.G., Dunlap, G., Horner, R.H., Koegel, R., Turnbull, A., Sailor, W., et. al. (1997). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions*, 4, 4 & 20. Retrieved from <http://www.carf.org/home>

Carr, E. G., & Horner, R. H. (1997). Behavioral support for students with severe disabilities functional assessment and comprehensive intervention. *Journal of Special Education*, 31 (1), 21, 84-104.

- Celep, C. (2000). The correlation of the factors: The prospective teachers' sense of efficacy and beliefs, and attitudes about student control. *National Forum of Teacher Educational Administration and Supervision Journal*, 17 (4), 21p.
- Chambers, S.M., Henson, R.K., & Sienty, S.F. (February, 2001). *Personality types and teaching efficacy on predictors of classroom control orientation in beginning teachers*. Paper presented at the Annual Meeting of the Southwest Educational Research Association, New Orleans, LA (ERIC Documentation Reproduction Service No. ED452184)
- Chaplain, R. P. (2008). Stress and psychological distress among trainee secondary teachers in England. *Educational Psychology*, 28, 195–209.
- Cherniss, C. (1993). Role of professional self-efficacy in the etiology and amelioration of burnout. In W. B. Schaufeli, C. Maslach, & T. Marek, *Professional burnout: Recent developments in theory and research* (135-149). Taylor and Francis: Washington, DC.
- Cooper, J.O.; Heron, T.E.; Heward, W.L. (2007). *Applied Behavior Analysis* (2nd ed.). Prentice Hall.
- Council for Exceptional Children (2008). *Classifying the State of Evidence for Special Education for Special Education Professional Practices: CEC practice study manual* Arlington, VA: Author. Retrieved from [www.cec.sped.org/Content/NavigationMenu/ Professional Development/ Professional Standards/ Practice Studies Manual 1 25.pdf](http://www.cec.sped.org/Content/NavigationMenu/Professional%20Development/Professional%20Standards/Practice%20Studies%20Manual%201%2025.pdf)
- Council for Exceptional Children (March, 2010a). *CEC ESEA Reauthorization Recommendations*. Arlington, VA: Author. Retrieved from www.cec.sped.org

Council for Exceptional Children (March, 2010b). *CEC Professional Standards*.

Arlington, VA: Author. Retrieved from www.cec.sped.org

Crisis Prevention Institute. (2005). *Participant workbook for the nonviolent crisis intervention training program*. Brookfield, WI: Compassion Publishing, Ltd.

Crisis Prevention Institute. (2008). *Positive behavioral interventions and supports (PBIS) and nonviolent crisis intervention training manual*. Brookfield, WI: Compassion Publishing, Ltd.

Crisis Prevention Institute. (2009). *CPI and alignment with IDEA..* Brookfield, WI: Compassion Publishing, Ltd.

Crisis Prevention Institute. (2010). *Instructor manual for the nonviolent crisis intervention training program*. Brookfield, WI: Compassion Publishing, Ltd.

Darling-Hammond, L. & Richardson, N. (2009, February). *Professional learning in the learning profession: A status report on teacher development in the united states and abroad*. Powerpoint presentation at the meeting of the National Staff Development Council, Washington, D.C.

Donat, D.C. (2003). An analysis of successful efforts to reduce the use of seclusion and restraint at a public psychiatric hospital. *Psychiatric Services*, 54(8), 1119-1123.

DuFour, R., DuFour, R., Eaker, R., & Many, T. (2006). *Learning by Doing; A handbook for professional learning communities at work*. Solution Tree: Bloomington, IN.

Dunlap, G., & Hieneman, M. (1999). Developing positive behavioral support for students with challenging behaviors: Issues in conducting functional assessments efficiently and effectively. In Bullock, L.B. & Gable, R.A. (Series Ed.). *Council for Children with Behavioral Disorders* (Third Mini-Library Series, pp.

5 -13). VA: Reston.

Dunst, C.J., Trivette, C.M., & Deal, A.G. (2011). Effects of in-services training on early intervention practitioners' use of family-systems intervention practices in the USA. *Professional Development in Education*, 37(2), 181-196. doi: 10.1080/19415257.2010.527779. Online at <http://www.informaworld.com>

Evans, D. (1997). *Policy issues for inclusive schools: Toward a unified education system in special education practice*. Pacific Grove, CA: Brooks/Cole Publishers.

Evers, W. J. G., Gerrichhauzen, J., & Tomic, W. (2000). The prevention and mending of burnout among secondary school teachers. *U. S. Department of Education Technical Report, January 2000*, 1- 44.

Fives, H., & Buehl, M. M.(2010). Examining the Factor Structure of the Teachers' Sense of Efficacy Scale. *The Journal of Experimental Education*, 78, 118–134.

Fowler, F. C., (2004). *Policy studies for educational leaders: An introduction* (2nd Ed.). Upper Saddle River, NJ: Merrill.

Fox, J. J., & Conroy, M.A.(2000). FBA for children and youth with emotional-behavior disorders: Where we should go in the twenty-first century. *Preventing School Failure*, 44, 140-141.

Friedman, I. A.(1995). Student behavior patterns contributing to teacher burnout. *Journal of Educational Research*, 88 (5), 281- 289.

Friman, P. C. (2010). Cooper, heron, and heward's applied behavior analysis (2nd. Ed.): Checkered flag for students and professors, yellow flag for the field. *Journal of Applied Behavior Analysis*, 43 (1), 161 -174.

Fuchs, D., & Fuchs L. S. (2001). Responsiveness-to-intervention: A blueprint for

practitioners, policymakers, and parents. *Teaching Exceptional Children*, 38(1), 57-61.

Fullan, M. (2001). *Leading in a culture of change*. San Francisco: Jossey – Bass.

Gall, M.D., Gall, J.P., & Borg, W.R. (2007). *Educational research: An introduction (8th Ed.)*. Boston: Pearson Education, Inc.

Gallagher, J. (1997). *The role of policy in special education reform*. In J. L. Paul, et al. (Eds.), *Special education practice: Applying the knowledge, affirming the values, and creating the future* (pp. 26-42). Pacific Grove CA: Brooks/Cole Publishing Company.

Garet, M.S., Porter, A.C., Desimone, L., Birman, B.F., & Yoon, K.S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38 (4), 915-945.

Gibson, J. & Dembo, P. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology* (76), 569-582.

Gordon, L.M. (2001). *High teacher efficacy as a marker of teacher effectiveness in the domain of classroom management*. Paper presented at the Annual Meeting of the California Council on Teacher Education, San Diego, CA (ERIC Document Reproduction Service No. ED465731)

Greene, R.W., Ablon, J.S., & Martin, A. (2006). Use of collaborative problem solving to reduce seclusion and restraint in child and adolescent inpatient units. *Psychiatric Services*, 57(5), 610-612.

Greenglass, E. R., & Burke, R. J. (2003). Teacher stress. In M. F. Dollard, A. H. Winefield, & H. R. Winefield (Eds.), *Occupational stress in the service*

professions (pp. 213–236). New York: Taylor & Francis.

Guskey, T.R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8 (3/4), 381-391.

Guthrie, J.W., & Schuermann, P. (2010). *Successful school leadership: Planning, politics, performance, and power*. Boston: Allyn & Bacon.

Hallahan, D.P. (April, 2006). *Challenges facing the field of learning disabilities*.

Summary of presentation at National SEA Conference on SLD Determination:

Integrating RTI within SLD Determination Process, National Research Center on

Learning Disabilities. (April 19-21, 2006), Kansas City, MO. Retrieved from

<http://www.nrcld.org/research/rti.shtml>

Handle With Care. (2010). *Behavior management system: Behavior management and restraint training instructor certification program*. Retrieved from www.handlewithcare.com

Hanley, G.P., Iwata, B. A., & McCord, B.E. (2003). Functional analysis of problem behavior: A review. *Journal of Applied Behavior Analysis*, 36 (2), 147-185.

Helmer, J., Bartlett, C., Wolgemuth, J. R., & Lea, T. (2011). Coaching (and) commitment: Linking ongoing professional development, quality teaching and student outcomes. *Professional Development in Education*, 37(2), 197–211. doi: 10.1080/19415257. 2010.533581

Hendrickson, J. M., Gable, R. A., Conroy, M.A., Fox, J., & Smith, C. (1999). Behavioral problems in schools: Ways to encourage functional behavior assessment (FBA) of disciplining-evoking behavior of students with emotional

and/or behavioral disorders (EBD). *Education and Treatment of Children*, 22, 280-290.

Henson, R.K. (2001a, January). *Teacher self-efficacy: Substantive implications and measurement dilemmas*. Paper presented at the Annual Meeting of the Educational Research Exchange, College Station, TX (ERIC Document Reproduction Service No. ED452208)

Henson, R.K. (2001b). *Relationship between preservice teachers' self-efficacy, task analysis, and classroom management beliefs*. Paper presented at the Annual Meeting of the Southwest Educational Research Association, New Orleans, LA (ERIC Document Reproduction Service No. ED4400844)

Henson, R.K., Bennett, D.T., Sienty, S.F., Chambers, S.M. (2000, April). *The relationship between means-end task analysis and context-specific and global self-efficacy in emergency certification teachers: Exploring a new model of teacher efficacy*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA (ERIC Document Reproduction Service No. ED440974)

Henson, R.K., & Chambers, S.M. (2002). *Personality type as a predictor of teaching efficacy and classroom control beliefs in emergency certification teachers*. Paper presented at the Annual Meeting of the Southwest Educational Research Association, Austin, TX (ERIC Document Reproduction Service No. ED468156)

Holcomb, E.L. (2001). *Asking the Right Questions: Techniques for Collaboration and School Change*. Corwin Press, Inc.: Thousand Oaks, CA.

Horner, R.H. (1999). Positive behavior supports. In M. Wehmeyer & J. Patton, (Eds.),

Mental Retardation in the 21st Century (pp. 181-196). Austin, TX: Pro-Ed.

Horner, R.H., & Carr, E.G. (1997). Behavioral support for students with severe disabilities: Functional assessment and comprehensive intervention. *Journal of Special Education, 31*, 84-104.

Horner, R.H., & Kratochwill, T.R. (2012). Synthesizing single-case research to identify evidence-based practices: Some brief reflections. *Journal of Behavioral Education*. doi: 10.1007/s10864-012-9152-2.

Hoy, A.W. (2000). *Changes in teacher efficacy during the early years of teaching*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. Session 43:22, *Qualitative and Quantitative Approaches to Examining Efficacy in Teaching and Learning*.

Hunzicker, J.L., (2010). *Characteristics of effective professional development: a checklist* Retrieved from ERIC database (ED510366). Available from: <http://www.eric.ed.gov/PDFS/ED510366.pdf>

Individuals with Disabilities Education Act of 1990, Pub. L. No. 101-336, §201-46, 104 Stat. 327 (1990).

Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 105-17, § 101, 111 Stat. 37 (1997).

Individuals with Disabilities Education Improvement Act of 2004, Pub. L. No. 108 446, §615, 118 Stat. 2647 (2004).

Ingvarson, L., Meiers, M., & Beavis. (2005). Factors affecting the impact of professional development programs on teachers' knowledge, practice, student outcomes, and efficacy. *Education Policy Analysis Archive, 13* (10), 1-28.

Kavale, K. A., & Forness, S. R. (2000). Policy decisions in special education: The role of meta analysis. In R. Gersten, E. P. Schiller, & S. Vaughn (Eds.), *Contemporary special education research: Synthesis of the knowledge base on critical instructional issues* (pp.281–326). Mahway, NJ: Lawrence Erlbaum.

Keogel, L. K., Keogel, R. L., & Dunlap, G. (Eds.) (1996). *Positive behavioral support: Including people with difficult behavior in the community*. Baltimore, MD: Paul H. Brookes.

Klassen, R. M. (2010). Teacher stress: The mediating role of collective efficacy beliefs. *The Journal of Educational Research, 103*, 342–350.

Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology, 77*, 229–243.

Kotaman, H. (2010). Turkish early childhood educators' sense of teacher efficacy. *Journal of Research in Educational Psychology, 8* (2), 603-616.

Kretlow, A.G., & Bartholomew, C.C. (August, 2010). Using coaching to improve the fidelity of evidence-based practices: A Review of Studies. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 33* (4), 279-299. doi: 10.1177/0888406410371643

Kretlow, A.G., & Blatz, S. L. (May/June 2011). (May/June 2007). The ABCs of evidenced-based practice for teachers. *Teaching Exceptional Children, 43* (5), 8 -19.

Kuzsman, F. L., & Schnall, H. (1987). Managing teachers' stress: Improving discipline. *The Canadian School Executive, 6*, 3-10.

- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, 53, 27–35.
- Lavoie, R. (2007). *The Motivational Breakthrough: 6 secrets to Turning On the Tune-out Child* Simon and Schuster, NY.
- Lea, M.R., & Nicoll, K. (2002). *Distributed learning: social and cultural approaches to practice*. New York: Routledge.
- Ling, S., Hawkins, R.O., & Weber, D. (2011). Effects of classwide interdependent group contingency designed to improve the behavior of and at-risk student. *Journal of Behavioral Education*, 21, 1, 34 – 57. doi: 10.1007/s10864-11-9155-8
- Liljequist, L., & Renk, K. (2007). The relationships among teachers' perceptions of student behaviour, teachers' characteristics, and ratings of students' emotional and behavioural problems. *Educational Psychology*, 27, (4), 557–571.
- Lopes, J.A., Monteiro, I., Sil, V. (2004). Teachers' perceptions about teaching problem students in regular classrooms. *Education and Treatment of Children*, 27 (4), 394-419.
- Ludlow, B. (Sept./Oct. 2011). Behavior interventions – old problems, new solutions. *Teaching Exceptional Children*, 44 (1), 6.
- Maag, J.W. (2001). Rewarded by punishment: reflections of the disuse of positive reinforcement in schools. *Exceptional Children*, 67(2).
- MacDonald, V., & Speece, D. L. (2001). Making time: A teacher's report of her first year of teaching children with emotional disorders. *Journal of Special Education*, 35, 84-91.
- Mandt System (2009). *Reducing workplace violence through positive behavior supports:*

Building healthy workplace relationships since 1975. Retrieved from

<http://www.mandtsystem.com>

Martin, B.N., Crossland, B., & Johnson, A. (2001, November). *Is there a connection:*

Teachers' sense of responsibility, and student success? Paper presented at Mid

South Educational Research Association, Little Rock, AR. (ERIC Document

Reproduction Service No. ED460116)

Marzano, R.J., Gaddy, B.B., and Dean, C. (2000). *What works in classroom instruction.*

Aurora, CO: McREL.

McLaughlin, M.J., & Nolet, V. (2004). *What Every Principal Needs to Know About*

Special Education. Corwin Press, Thousand Oaks, CA.

Mergler, A.G., & Tangen, D. (2010). Using microteaching to enhance teacher efficacy

in preservice teachers. *Teaching Education, 21* (2), 199-210.

Meyer, L.H. & Evans, I.M. (1993). Meaningful outcomes in behavioral intervention:

Evaluating positive approaches to the remediation of challenging behaviors. In

Reichle & D. Wacker (Eds.), *Communicative alternatives to challenging*

behavior: Integrating functional assessment and intervention strategies (407-428).

Baltimore, MD: Paul H. Brookes.

National Association of State Directors of Special Education, Incorporated and the

Council of Administrators of Special Education (2006, May). *Response to*

intervention: A joint paper by the NASDSE & CASE. Retrieved from

<http://www.air.org.ldsummit/>

National Council for Accreditation of Teacher Education [NCATE] (2008). Retrieved

from www.ncate.org

National Research Center on Learning Disabilities (NRCLD): *Responsiveness-to*

intervention symposium. December 4-5, 2003. Kansas City, MO. Retrieved

from <http://nrclld.org/symposium2003/summary/index.html>

National Staff Development Council [NSDC]. (2009). *NSDC Policy Points: Information for policy makers about professional development that improves student results*.

April 2009, 1 (2), 1-4. Retrieved from www.nsdc.org

Nelson, J. R., Maculan, A., Roberts, M. L., & Ohlund, B. J. (2001). Source of occupational stress for teachers of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 9, 123-131.

Oblinger, D. G., Barone, C. A., & Hawkins, B.L. (2001). *Distributed education and its challenges: an overview*. Washington, DC: American Council on Education.

O'Neill, S. & Stephenson, J. (2012). Exploring Australian pre-service teachers sense of efficacy, its sources, and some possible influences. *Teacher and Teacher Education*, doi:10.1016/j.tate.2012.01.008.

Pajares (2002). *Overview of social cognitive theory and of self-efficacy*.12-8-04.

Retrieved from <http://www.emory.edu/EDUCATION/mfp/eff.html>

Provasnik, S., & Dorfman, S. (2005). *Mobility in the workforce*. (NCES 2005-114).

U.S. Department of Education, National Center for Education Statistics.

Washington, DC: U.S. Government Printing Office. (ERIC Document

Reproduction Service No. ED485860)

Putnam, R.T., & Borko, H. (1997). Teacher learning: Implications of the new view of cognition. In B.J. Biddle, T.L. Good, & I.F. Goodson (eds.). *The international handbook of teachers and teaching*. Dordrecht, Netherlands: Kluwer.

- Ross, J. & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of a randomized field trial. *Journal of Educational Research, 101* (1), 50-60.
- Safran, S. P., & Oswald, K. (2003). Positive behavior supports: Can schools reshape disciplinary practices? *Exceptional Children, 69*, 361-373.
- Sallows, G.O. & Graupner, T. D. (2005). Intensive behavioral treatment for children with autism: Four-year outcome and predictors. *American Journal on Mental Retardation, 110*, 417- 438.
- Schaufeli, W. B., Maslach, C., & Marek, T. (1993). Professional burnout: Recent developments in theory and research. Taylor and Francis: Washington, DC.
- Scott, T. M., Bucalos, A., Liaupsin, C., Nelson, M.C., Jolivette, K., & DeShae, L. (2004). Using functional behavior *assessments* in general education settings: Making a case for effectiveness and efficiency. *Behavioral Disorders, 29* (2), 189 – 201.
- Scott, T. M., Nelson, C. M., & Zabala, J. (2003). Functional behavior assessment training in public schools: Facilitating systemic change. *Journal of Positive Behavior Interventions, 5*, 216-224.
- Shores, R.E., Jack, S.L., Gunter, P.L., Ellis, D.N., DeBriere, T.J., & Wehby, J.H. (1993). Classroom interactions of children with behavior disorders. *Journal of Emotional and Behavioral Disorders, 1*, 27-39.
- Smith, T., Groen, A.D., & Wynn, J.W. (2000). Randomized trial of intensive early intervention for children with pervasive developmental disorder. *American Journal on Mental Retardation, 105*, 269-285.

- Solomon, B.J., Klein, S.A., Hintz, J.M., Cressey, J.M., & Peller, S.L. (2012). A meta analysis of school-wide positive behavior support: an exploratory study using single-case synthesis. *Psychology in Schools, 49*(2), 105-121.
- Sugai, G. (2004). Commentary: Establishing efficient and durable systems of school based support. *School Psychology Review, 32*, 530-535.
- Sugai, G., & Horner, R. H. (1999). Discipline and behavioral support: Preferred processes and practices. *Effective School Practices, 17*(4), 10-22.
- Sugai, G. & Horner, R.H. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child and Family Behavior Therapy, 24*, 23-50.
- Sugai, G., & Horner, R. H. (2009). *Considerations for seclusion and restraint use in schoolwide positive behavior supports*. Retrieved from http://www.pbis.org/common/pbisresources/publications/Seclusion_Restraint_in_BehaviorSupport.pdf
- Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A. P., Turnbull III, H. R., Wickham, D., Wilcox, B., & Ruef, M. (2000). Applying positive behavior support and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions, 2*(3), 131–143.
- Sulzer-Azaroff, B. & Mayer, G. R. (1994). *Achieving educational excellence: Behavior analysis for achieving classroom and schoolwide behavior change*. San Marcos, CA; Western Image.
- Swackhamer, L.E., Koellner, K., Basile, C., & Kimbrough, D. (2009, Spring).

Increasing the self-efficacy of inservice teachers through content knowledge.

Teacher Education Quarterly, 63-78.

Tolan, P., & Guerra, N. (1994). What works in reducing adolescent violence: An empirical review of the field. *Center for the Study and Prevention of Violence*. University of Colorado, Boulder.

Tschannen-Moran, M. & Hoy, A. (2001). Teacher-efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783–805.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W.K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.

United States Department of Education. (2002). *Elementary & secondary education: No child left behind (NCLB) policy documents affecting the education of infants, toddlers, children and youth with disabilities*. Retrieved from <http://www.ed.gov/policy/speced/guid/nclb/>

United States Department of Education. (2004). *IDEA: Building the legacy of IDEA 2004*. Retrieved from <http://idea.ed.gov/>

United States Department of Education. (2009). *Federal register: Assistance to States for the education of children with disabilities and preschool grants for children with disabilities; Final Rule (34 CFR Part 300)*. Washington, DC: Author.

United States Department of Education, Office of Special Education Programs. (2004). *Center on Positive Behavior Intervention Supports (PBIS): SW-PBIS Implementation Blueprint*. Washington, DC: Author.

United States Department of Education, Office of Special Education Programs. (2010).

Twenty Eighth annual report to Congress on the implementation of the Individuals with Disabilities Education Act. Washington, DC: Author.

United States Government Accountability Office (GAO). (2009). *Seclusions and restraints: Selected cases of death and abuse at public and private schools and treatment centers.*(Report No. GAO 09-719T). Washington, DC: U.S. G.A.O.

Virginia Department of Education, Training and Technical Assistance Centers. (2009).

Effective Schoolwide Discipline in Virginia: A State Directed Initiative that Provides Positive Behavioral and Academic Support to All Students (4th ed.).

Retrieved from <http://www.ttac.odu.edu/esd>

Westling, D. L. (2010). Teachers and challenging behavior: Knowledge, views, and practices. *Remedial and Special Education, 31*(1), January/February 2010.

What Works Clearinghouse (WWC). (2010). *Early Childhood Interventions for Children with Disabilities.* August, 2010. WWC Intervention Report: *Lovaas Model of Applied Behavior Analysis.* Retrieved from www.eric.gov.ed/PDFS/ED511483.pdf

Williams, D., & Coles, L. (June 2007). Teachers' approaches to finding and using research based evidence: An information literacy perspective. *Educational Research, 49* (2), 185-206.

Wilson, S.M. & Berne, J. (2009). *Review of Research in Education.* Chapter 6: Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. Retrieved from <http://rre.aera.net>, 173-209.

Wilson, S.M., Floden, R.E., & Ferrini-Mundy, J. (2002). Teacher preparation research:

An insider's view from the outside. *Journal of Teacher Education*, 53, 190-204.

Yeung, A.S., Mooney, M., Barker, K., & Dobia, B. (2009). Does school-wide positive behavior system improve learning in primary schools? Some preliminary findings. *New Horizons in Education*, 57 (1), 17 – 31.

Yılmaz, H. & Çavaş, P. H. (2008). The effect of the teaching practice on pre-service elementary teachers in science teaching efficacy and classroom beliefs. *Eurasia Journal of Mathematics, Science, & Technology Education*, 4(1), 45-54

Appendix A. Superintendents' Letter

Sheila R. Carr
POB 391
Callao, VA 22435

March 2, 2012

Dear _____, Division Superintendent

The purpose of this letter is to request your assistance in disseminating a survey to your teachers of students in grades PK-12. I am a doctoral candidate at The College of William and Mary working towards my Ed.D. in Educational Policy, Planning, & Leadership. I am currently in the process of completing my dissertation. The purpose of my study is to determine the **relationship between teacher self-efficacy beliefs and their use of evidenced-based practices in managing students with challenging behaviors**. The survey data will provide information on teachers' beliefs, knowledge, and use of evidenced-based practices in managing students with challenging behaviors. These data will help identify needed professional development and supports for teachers.

I have developed an on-line survey that can be completed in about ten minutes. The study is designed to obtain input from professional, licensed teachers across a region of a mid-Atlantic state, using a one-time web-based survey. The identity of all participants will remain confidential, as there is no identifying information requested on the survey. The window of opportunity to respond to this survey will be from 3/20/12 through 4/21/12.

This project was found to comply with appropriate ethical standards and was exempted from the need for formal review by The College of William and Mary Protection of Human Subjects Committee (phone 757-221-3966) on 2012-02-09 and expires on 2013-02-09. It is required to notify Dr. Ward, Chair of the EDIRC, at 757-221-2358 (edirc-l@wm.edu) and Dr. Kirkpatrick, Chair of the PHSC at 757-221-3997 (phsc-l@wm.edu) if any issues arise during this study.

I would greatly appreciate you forwarding the secure survey link to your teachers of grades PK-12. The link is: https://wmsurveys.qualtrics.com/SE/?SID=SV_9oaP7dB5XBMpkZ6. The survey is attached for your review. Participants who complete the survey will be provided a *FREE* electronic resource toolkit on the topic of managing students with challenging behaviors. Once the study has been completed, a summary of the findings will be provided via an email weblink.

If you are **not** interested in having your teachers participate in this survey, please respond by email: sx carr@emailwm.edu. Feel free to contact me if you have any questions, concerns, or need further information by email or phone (804-543-1340). Thank you for your time and consideration.

Respectfully,

S. R. Carr

Sheila R. Carr, Ed.S.
Doctoral Candidate, College of William & Mary

Appendix B. Survey (Includes Introduction to Participants and Confidentiality)

**Relationship Between Teacher Self-Efficacy Beliefs and Use of Evidence-based
Practices in Managing Students with Challenging Behaviors Survey**

Purpose of the Survey

Your expertise is needed to gather information about practicing teachers' beliefs and practices used to address challenging behaviors exhibited by their students. It is designed for elementary and secondary teachers working in public schools. It is not intended for others not involved in directly teaching students on a day to day basis (e.g., psychologists, counselors, school therapists, administrators).

Your participation will be greatly appreciated! The results of the survey will provide valuable information on the impact of teachers' use of evidence-based practices in addressing challenging classroom behaviors. Further, your input will be helpful in designing relevant professional development supports to assist teachers in effectively addressing challenging behaviors. In order for the results to have maximum utility, candid responses are requested.

Be assured all individual responses will remain **anonymous** and no individual responder will be identified. Your participation is **voluntary** and will contribute significantly to this research project as well as to the teaching profession. You may exercise your **right to withdraw consent** and refrain from participating in this study at any time.

Completing this survey will indicate **your consent** to participate in this research project. At the end of the survey, you will also receive a **FREE Resource Toolkit** filled with helpful tools to use in classroom settings on the topic of coping with challenging behaviors. You should be able to complete the on-line survey within 10 minutes. The window of opportunity to respond to this survey will be from March 20, 2012 through April 21, 2012. **THANK YOU, in advance, for your valuable contribution to the teaching profession!**

This survey is designed to gather information for a doctoral research project. This survey instrument has been reviewed and approved by The College of William & Mary Human Subjects Review Committee as well as the researcher's doctoral committee. This project was found to comply with appropriate ethical standards and was exempted from the need for formal review by The College of William and Mary Protection of Human Subjects Committee (phone 757-221-3966) on 2012-02-09 and expires on 2013-02-09. It is required to notify Dr. Ward, Chair of the EDIRC, at 757-221-2358 (edirc-l@wm.edu) and Dr. Kirkpatrick, Chair of the PHSC at 757-221-3997 (phsc-l@wm.edu) if any issues arise during this study.

If you have any questions regarding this study and/or the survey, please contact the Doctoral Candidate or Dissertation Committee Chair. Contact information is below.

Doctoral Candidate:

Sheila R. Carr, Ed.S.
Doctoral Candidate

Dissertation Committee Chair:

Sharon H. deFur, Ed.D.
School of Education

College of William & Mary 804-543-1340 (Cell) sxcarr@emailwm.edu	College of William & Mary 757-221-2150 (Office) shdefu@wm.edu
--	--

Definition and Examples of Challenging Behavior

As used on this survey, challenging behaviors are behaviors that present physical, instructional, or social concerns to the teacher. They disrupt teaching and the learning process. For example, challenging behavior can include any of the following: defiance, non-compliance, disruption, and verbal aggression.

Section I. Teacher Beliefs about Challenging Behavior

Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

1: None at all	3: Very Little	5: Some Degree	7: Quite A Bit	9: A Great Deal
1. How much can you do to control disruptive behavior of students with challenging behaviors in the classroom?			1 2 3 4 5 6 7 8 9	
2. How much can you do to motivate students with challenging behaviors who show low interest in school work?			1 2 3 4 5 6 7 8 9	
3. How much can you do to calm a student with challenging behaviors who is noisy or disruptive?			1 2 3 4 5 6 7 8 9	
4. How much can you do to help your students with challenging behaviors value learning?			1 2 3 4 5 6 7 8 9	
5. To what extent can you craft good questions for students with challenging behaviors?			1 2 3 4 5 6 7 8 9	
6. How much can you do to get students with challenging behaviors to follow school rules?			1 2 3 4 5 6 7 8 9	
7. How much can you do to get students with challenging behaviors to believe they can do well in school work?			1 2 3 4 5 6 7 8 9	
8. How well can you establish a classroom management system with each group of students with challenging behaviors?			1 2 3 4 5 6 7 8 9	
9. To what extent can you use a variety of assessment strategies for students with challenging behaviors?			1 2 3 4 5 6 7 8 9	

10. To what extent can you provide an alternative explanation or example when students with challenging behaviors are confused?	1 2 3 4 5 6 7 8 9
11. How much can you assist families in helping their child(ren) with challenging behaviors do well in school?	1 2 3 4 5 6 7 8 9
12. How well can you implement alternative teaching strategies for students with challenging behaviors in your classroom?	1 2 3 4 5 6 7 8 9

Section II. Current Practices/Strategies You Use for Managing Students with Challenging Behaviors

Please indicate your level of agreement on the use each of the following strategies when attempting to improve challenging behavior by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

1: None at all	3: Very Little	5: Some Degree	7: Quite A Bit	9: A Great Deal					
1. I observe the students behavior to determine what causes the behavior to occur.	1	2	3	4	5	6	7	8	9
2. I interview other people (parents or other teachers) to determine what causes the behavior to occur.	1	2	3	4	5	6	7	8	9
3. I identify conditions that trigger the behavior (antecedents) so that they can be avoided.	1	2	3	4	5	6	7	8	9
4. I determine the purpose or function of the behavior.	1	2	3	4	5	6	7	8	9
5. I directly teach a more acceptable behavior or skill.	1	2	3	4	5	6	7	8	9
6. I reinforce desirable behavior.	1	2	3	4	5	6	7	8	9
7. I avoid reinforcing undesirable behavior.	1	2	3	4	5	6	7	8	9
8. I use social reinforcement such as praise and attention for appropriate behavior.	1	2	3	4	5	6	7	8	9
9. I use tangible reinforcement such as food or material rewards for appropriate behavior.	1	2	3	4	5	6	7	8	9
10. I use activities or privileges such as free time for appropriate behavior.	1	2	3	4	5	6	7	8	9

11. I frequently measure the behavior (by counting or timing it) to see if it is occurring more or less often when I try to improve it.	1 2 3 4 5 6 7 8 9
12. I change my interactions with students (e.g. by offering choices, by the way I speak) to try to improve their behavior.	1 2 3 4 5 6 7 8 9
13. I change the physical arrangements or conditions in my classroom to try to improve behavior.	1 2 3 4 5 6 7 8 9
14. I change my teaching approach with some students to try to improve their behavior.	1 2 3 4 5 6 7 8 9
15. I use a structured behavior intervention plan based for students with more serious challenging behaviors.	1 2 3 4 5 6 7 8 9
16. I use verbal de-escalation techniques to prevent escalation of inappropriate behaviors.	1 2 3 4 5 6 7 8 9
17. I use redirection techniques to prevent escalation of inappropriate behaviors.	1 2 3 4 5 6 7 8 9
18. I set clear expectations in my classroom to prevent inappropriate behaviors.	1 2 3 4 5 6 7 8 9

Section III. Types of Supports Received & Impact on Practices to Manage Students with Challenging Behaviors

A. Please indicate what types of supports you have received during your teaching career on managing students with challenging behaviors? Check Yes or No. [If YES, please answer section B]

B. Please indicate to what degree the type of professional development you received impacted your practice to effectively manage students with challenging behaviors?

1: None at all 3: Very Little 5: Some Degree 7: Quite A Bit 9: A Great Deal

University Courses (Pre-service or In-service)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9
In-service Professional Development (Modules, Conferences, Workshops)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9
Individual Coaching/Mentoring	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9

Participation in School-wide Programs (PBIS, RtI, etc.)	<input type="checkbox"/> Yes	1 2 3 4 5 6 7 8 9
	<input type="checkbox"/> No	

Section IV. Topics of Supports Received & Impact on Practices to Manage Students with Challenging Behaviors

A. Please indicate what topics of support have you received during your teaching career on managing students with challenging behaviors? Check Yes or No. [If YES, answer section B]

B. Please indicate to what degree the topic of professional development you received impacted your practice to effectively manage students with challenging behaviors?

1: None at all 3: Very Little 5: Some Degree 7: Quite A Bit 9: A Great Deal

Principles of Applied Behavior Analysis (ABA)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9
Functional Behavior Assessments/Behavior Intervention Plans (FBA/BIP)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9
Positive Behavior Intervention Supports (PBIS)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9
Response to Intervention (RtI)	<input type="checkbox"/> Yes <input type="checkbox"/> No	1 2 3 4 5 6 7 8 9

DEMOGRAPHICS Section A: Teaching Credentials, Position, & Assignment

Please mark the appropriate response(s) for each of the following questions.

What type of state certificate or license do you have for your current teaching assignment? (Check one only)	<input type="checkbox"/> Professional, Collegiate <input type="checkbox"/> Provisional <input type="checkbox"/> Other _____
What is your highest college degree? (Check one only)	<input type="checkbox"/> Doctoral <input type="checkbox"/> Specialist <input type="checkbox"/> Master <input type="checkbox"/> Bachelor
How many years have you been teaching?	<input type="checkbox"/> 1 -3 <input type="checkbox"/> 4 -6 <input type="checkbox"/> 7- 9 <input type="checkbox"/> ≥ 10
What is your current teaching position?	<input type="checkbox"/> Special Education Teacher <input type="checkbox"/> General Education Teacher

DEMOGRAPHICS Section A: Teaching Credentials, Position, & Assignment	
Please mark the appropriate response(s) for each of the following questions.	
What level do you teach? (Choose only one)	<input type="checkbox"/> Elementary (PK – 5 th grade) <input type="checkbox"/> Middle (6 th – 8 th grade) <input type="checkbox"/> High (9 th – 12 th grade)
Do you intend to remain working in the field of education for the foreseeable future – i.e., next 3 to 5 years?	<input type="checkbox"/> Yes <input type="checkbox"/> No

DEMOGRAPHICS Section B. Percentage of Students Exhibiting Challenging Behaviors		
Please indicate <u>how many students are on your caseload this year</u> , and <u>how many of those students exhibit challenging behaviors</u> in the following categories? (Please write numbers in blanks).		
CATEGORY	Number of Students on Caseload	Number of those Students Exhibiting Challenging Behaviors
ADHD (Other Health Impairment or OHI)		
Autism or other Pervasive Developmental Disorder (PDD)		
Emotional Disability (ED)		
Mild Intellectual Disability (ID)		
Specific Learning Disability (SLD)		
Students who <u>do not</u> have an IEP or 504 Service Plan		

Appendix C. FREE Resource Toolkit

Resource Toolkit: Managing Challenging Student Behaviors

Compiled by Sheila R. Carr, Ed.S.

OSEP TECHNICAL ASSISTANCE CENTER ON POSITIVE BEHAVIORAL INTERVENTIONS & SUPPORTS

<http://www.pbis.org/default.aspx>

TECHNICAL ASSISTANCE CENTER ON SOCIAL EMOTIONAL INTERVENTION FOR YOUNG CHILDREN (TACSEI)

<http://www.challengingbehavior.org/>

Center on the Social and Emotional Foundations for Early Learning (CSEFEL)

<http://csefel.vanderbilt.edu/>

Center for Early Childhood Mental Health Consultation

<http://www.ecmhc.org/>

Make & Take Workshops

http://www.challengingbehavior.org/communities/make_n_take/make_n_take_home.html

Teacher First –Classroom Resources

http://www.teachersfirst.com/search_action.cfm?grade_low=0&grade_high=12&search_text=behavior+management&searchtype=all

TTAC ON-LINE

The Virginia Department of Education's Training/Technical Assistance Centers (T/TAC)
For Persons Serving Children and Youth With Disabilities

http://ttaonline.org/staff/s_resources/s_resources.asp?Page=3

NATIONAL CENTER ON RESPONSE TO INTERVENTION

<http://www.rti4success.org/>

RTI: ACTION NETWORK

<http://www.rtinetwork.org/?gclid=CPGe8red7K4CFQfe4Aod11piLA>

IRIS CENTER

<http://iris.peabody.vanderbilt.edu/fba/chalcycle.htm>

IES: INSTITUTE OF EDUCATION SCIENCES

What Works Clearinghouse

<http://ies.ed.gov/ncee/wwc/sitesearch.aspx?Search=challenging+behvairos&website=NCEE%2fWWC&x=0&y=0>

CENTER FOR EFFECTIVE COLLABORATION AND PRACTICE

<http://cecp.air.org/fba/default.asp>

EDUCATORS FOR SOCIAL RESPONSIBILITY

Educators for Social Responsibility's ONLINE TEACHER CENTER

<http://www.esrnational.org/otc/>

KENNEDY FRIEGER INSTITUTE

Behavioral Disorders/Self Injurious Behavior

<http://www.kennedykrieger.org/patient-care/diagnoses-disorders/behavioral-disordersself-injurious-behavior>

CHILD & ADOLESCENT BEHAVIOR LETTER (CABL)

Challenging classroom behavior: Approaches to Guiding a Teacher

<http://www.childadolescentbehavior.com/sample-articles/challenging-classroom-behaviorapproaches-guiding-teacher.aspx>

ZEPHYRUS INTERACTIVE EDUCATION ON THE WEB

Classroom Management and Dealing with Pupils

<http://www.zephyrus.co.uk/class%26pupilmanagement.html>

BRITISH OF COLUMBIA MINISTRY OF EDUCATION

Students with Intellectual Disabilities: A Resource Guide for Teachers

<http://www.bced.gov.bc.ca/specialed/sid/43.htm>

TEACHING CHANNEL.ORG

https://www.teachingchannel.org/videos?categories=topics_behavior

TEACHER VISION

Behavior Management Printables, Articles, & Resources (K-12)

<http://www.teachervision.fen.com/classroom-discipline/resource/5806.html>

EVERYONE IN EDUCATION.ORG

How to Manage Disruptive Behavior in Inclusive Classrooms

<http://www.teachervision.fen.com/classroom-discipline/resource/2943.html>

Responding to Challenging Behaviors

[http://www.umchs.org/umchsresources/administration/workplan/MentalHealth/MH22_Responding to Challenging Behavior.pdf](http://www.umchs.org/umchsresources/administration/workplan/MentalHealth/MH22_Responding%20to%20Challenging%20Behavior.pdf)

Positive Behavior Support: An Individualized Approach for Addressing Challenging Behavior

http://www.waisman.wisc.edu/birthto3/Oct2007_10thru12.pdf

Responding Professionally and Compassionately to Challenging Behavior

[http://www.fcs.utah.edu/info/cfdc/2610/Responding Professionally and Compassionately to Challenging Behavior.pdf](http://www.fcs.utah.edu/info/cfdc/2610/Responding%20Professionally%20and%20Compassionately%20to%20Challenging%20Behavior.pdf)

Transitioning Children Between Activities: Effective Strategies for Decreasing Challenging Behavior

http://www.ccbd.net/documents/bb/BB_V14N1_transitioning.pdf

The Effects of Integration on the Challenging Behavior of Severe Disabilities

http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/8/14/1`11.pdf

Key characteristics of Classroom and Group Support (Secondary Interventions)

http://www.beachcenter.org/pbs/pbs_at_school/classroom_and_group_support.aspx

Functional Behavioral Assessment and Positive Interventions: What Parents Need to Know

<http://www.pacer.org/parent/php/PHP-c79.pdf>

Supporting Children with Challenging Behaviors

<http://www.circleofinclusion.org/english/pim/six/index.html>

Council for Exceptional Children Positive Behavior Supports website

<http://ericec.org/faq/behavdis.html>

Information related to the legal perspective on discipline, particularly for students with disabilities.

<http://www.wrightslaw.com/info/discipl.index.htm>

Discipline and classroom management

<http://members.tripod.com/~ozpk/disc.html>

Many practical tips for behavior management

<http://www.geocities.com/Athens/Styx/7315/subjects/behavior.html>

The Center for Effective Collaboration and Practice

<http://cecp.air.org>

Behavior Advisor

<http://www.behavioradvisor.com/>

Appendix D. Research Matrix

Author(s), Year	N Size	Participants	Teacher Self- Efficacy (SE)	Use of Evidenced- based Practices (EBP)	PD & Impact on Teacher Knowledge (PK)	Teacher Experience (TE) & Impact on Practices	Difference Between GE & SE Teachers
			Beliefs	Practices	Knowledge	Experience	Teacher Type
Baker, 2005	345 Exp & Des	Ohio Teachers 82% GE 18 % SE	√	√	√		√
Bredeson, 2000	68,284 Exp.	Teachers across 13,271 schools			√		
Brouwers & Tomic, 2000	243 Exp.	Secondary Teachers	√		√		
Burnett, 2011	151 Exp	Secondary Teachers	√				
Dunst, Trivette, & Deal, 2011	423 Exp.	PK Teachers			√		
Evers, Gerrichhauzen, & Tomic, 2000	Des	Feasibility Study	√		√		
Garet, Porter, Desimone, Birman, & Yoon, 2001	1,027 Exp.	Math & Science Teachers			√		
Helmer, Bartlett, Wolgemuth, & Lea, 2010	11 Exp.	Rural Australian Teachers			√		

Author(s), Year	N Size	Participants	Teacher Self- Efficacy (SE)	Use of Evidenced- based Practices (EBP)	PD & Impact on Teacher Knowledge (PK)	Teacher Experience (TE) & Impact on Practices	Difference Between GE & SE Teachers
			Beliefs	Practices	Knowledge	Experience	Teacher Type
Henson, & Chambers, 2002	120 Exp.	Univ. TX 1 st Year Teachers	√				
Hoy, 2000	53 Exp	Elem. Ed. M.Ed. Cohort	√				
Kotaman, 2010	389 Exp	Turkish Early Chld Teachers 146 New 243 Exp.	√		√		
Lopes, Montiero, & Sil, 2004	430 Exp	Portugal Teachers 79% GE 21% SE Gr. 1-9		√		√	√
Martin, Crossland, & Johnson, 2001	271 Exp	SW Missouri Elem. Teachers			√	√	
Mergler, & Tangen, 2010	1: 315 2: 208 Exp	Australian Post Grad. Education students	√				
O'Neill, & Stephenson, 2012	573 Exp.	Australian Final year Primary Pre-service Teachers	√				
Ross & Bruce, 2007	106 Exp	Canadian 6 th Gr. Math Teachers	√		√	√	

Author(s)/ Year	N Size	Participants	Teacher Self- Efficac y (SE)	Use of Evidence d-based Practices (EBP)	PD & Impact on Teacher Knowledg e (PK)	Teacher Experienc e (TE) & Impact on Practices	Differenc e Between GE & SE Teachers
			Beliefs	Practices	Knowledg e	Experienc e	Teacher Type
Swackhamer , Koellner, Basile, & Kimbrough, 2009	88 Exp	Middle School Teachers	√			√	
Tschannen- Moran & Hoy, 2001	1: 224 2: 217 3: 183	Universit y Students - Preservice & Inservice teachers	√				
Westling, 2010	78 Exp.	General & Special Ed. Teachers Gr. K - 12	√	√	√		√
Yılmaz, & Çavaş, 2008	185 Exp	Pre- service Science Teachers	√				